U.S.-CANADA FREE TRADE AGREEMENT: IMPACT ON THE DOMESTIC PLYWOOD INDUSTRY

HEARING

BEFORE THE

SUBCOMMITTEE ON REGULATION AND BUSINESS OPPORTUNITIES

OF THE

COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

SECOND SESSION

WASHINGTON, DC, MARCH 8, 1988

Printed for the use of the Committee on Small Business

Serial No. 100-57

U.S. GOVERNMENT PRINTING OFFICE
88-643 WASHINGTON : 1988

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

H721-3

COMMITTEE ON SMALL BUSINESS

JOHN J. LAFALCE, New York, *Chairman*

NEAL SMITH, Iowa
HENRY B. GONZALEZ, Texas
THOMAS A. LUKEN, Ohio
IKE SKELTON, Missouri
ROMANO L. MAZZOLI, Kentucky
NICHOLAS MAVROULES, Massachusetts
CHARLES HATCHER, Georgia
RON WYDEN, Oregon
DENNIS E. ECKART, Ohio
GUS SAVAGE, Illinois
BUDDY ROEMER, Louisiana
NORMAN SISISKY, Virginia
ESTEBAN EDWARD TORRES, California
JIM COOPER, Tennessee
JIM OLIN, Virginia
RICHARD RAY, Georgia
CHARLES A. HAYES, Illinois
JOHN CONYERS, JR., Michigan
JAMES H. BILBRAY, Nevada
KWEISI MFUME, Maryland
FLOYD H. FLAKE, New York
H. MARTIN LANCASTER, North Carolina
BEN NIGHTHORSE CAMPBELL, Colorado
PETER A. DEFAZIO, Oregon
DAVID E. PRICE, North Carolina
MATTHEW G. MARTINEZ, California

JOSEPH M. McDADE, Pennsylvania
SILVIO O. CONTE, Massachusetts
WM. S. BROOMFIELD, Michigan
ANDY IRELAND, Florida
JOHN HILER, Indiana
DAVID DREIER, California
D. FRENCH SLAUGHTER, JR., Virginia
JAN MEYERS, Kansas
DEAN A. GALLO, New Jersey
J. ALEX McMILLAN, North Carolina
LARRY COMBEST, Texas
RICHARD H. BAKER, Louisiana
JOHN J. RHODES III, Arizona
JOEL HEFLEY, Colorado
FREDERICK S. UPTON, Michigan
ELTON GALLEGLY, California
CLYDE C. HOLLOWAY, Louisiana

DONALD F. TERRY, *Staff Director*
J. DREW HIATT, *Minority Staff Director*

SUBCOMMITTEE ON REGULATION AND BUSINESS OPPORTUNITIES

RON WYDEN, Oregon, *Chairman*

PETER A. DEFAZIO, Oregon
DAVID E. PRICE, North Carolina
THOMAS A. LUKEN, Ohio
ROMANO L. MAZZOLI, Kentucky
JIM COOPER, Tennessee
JIM OLIN, Virginia
FLOYD H. FLAKE, New York

WM. S. BROOMFIELD, Michigan
JAN MEYERS, Kansas
J. ALEX McMILLAN, North Carolina
LARRY COMBEST, Texas
RICHARD H. BAKER, Louisiana

STEVE JENNING, *Subcommittee Staff Director*
ANTHONY J. POWELL, *Minority Subcommittee Professional Staff Member*

CONTENTS

Page

Hearing held on March 8, 1988 1

WITNESSES

Tuesday, March 8, 1988

Anthony, Hon. Beryl, Jr., a Representative in Congress from the State of Arkansas 4
Galloway, John N., president, Hood Industries, Inc. 29
Holmer, Alan F., Deputy Representative, office of the U.S. Trade Representative 8
Hughes, Ann H., Deputy Assistant Secretary of Commerce for the Western Hemisphere, U.S. Department of Commerce 9
Robison, William T., president, American Plywood Association 25
Schaffer, Dr. Erwin L., Assistant Director, Forest Products Laboratory, Forest Service, U.S. Department of Agriculture 11
Stevenson, Bruce R., president, Bingen Plywood Co. 30

APPENDIX

Flint, Thomas R., director, technical services, American Plywood Association, statement submitted to the committee 147
Letters received by committee:
  Galloway, John N., president, Hood Industries, Inc. 155
  Leland, David D., president and chief executive officer, Plum Creek Timber Co., Inc. 156
  Morris, James R., chairman, board of trustees, American Plywood Association 157
  Morrow, William I., Monroe, LA 158
  Morrow, William, vice president and general manager, Wood Products, forest resources, energy resources, Manville Corp. 159
  Robison, William T., president, American Plywood Association 160
  Vike, Floyd, vice president, Williamette Industries, Inc. 162
Opening statements:
  Chandler, Hon. Rod, a Representative in Congress from the State of Washington 116
  Lott, Hon. Trent, a Representative in Congress from the State of Mississippi 40
  Smith, Hon. Robert F. (Bob), a Representative in Congress from the State of Oregon 38
Prepared statements:
  Anthony, Hon. Beryl, Jr. 41
  Galloway, John N. 133
  Holmer, Alan F., with attachments 45
  Hughes, Ann H. 103
  Robison, William T. 124
  Schaffer, Dr. Erwin L. 106
  Stevenson, Bruce R. 140
Winston & Strawn, Washington DC, summary of comments on the plywood standards of the FTA plywood industry members of the Council of Forest Industries of British Columbia 164

U.S.-CANADA FREE TRADE AGREEMENT: IMPACT ON THE DOMESTIC PLYWOOD INDUSTRY

TUESDAY, MARCH 8, 1988

House of Representatives,
Subcommittee on Regulation and
Business Opportunities,
Committee on Small Business,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2359–A, Rayburn House Office Building, Hon. Ron Wyden (chairman of the subcommittee) presiding.

Present: Chairman Wyden; Representatives DeFazio and McMillan.

Chairman **Wyden**. The Subcommittee on Regulation and business Opportunities is convened today to discuss provisions of a proposed U.S.-Canada trade treaty, an agreement that is so critical to the continued excellent relationship between our country and our friend and ally to the north.

We are going to focus today on treaty issues which are narrow but, nonetheless, of vital importance to the producers of U.S. plywood and, indeed, to Canadian manufacturers of plywood and veneer. Needless to say, these provisions are also crucial to tens of thousands of workers on both sides of the border who are directly employed by the plywood industry.

The landmark U.S.-Canada free trade agreement, signed by President Reagan and Prime Minister Mulroney last January, promises a more equitable, less divisive, and economically more stable future between the world's two largest trading partners. As required by law, committees in both the House and Senate will amend and approve enabling legislation that will add sinew to that skeletal structure before the agreement is ratified by the Congress. This hearing is designed to add information and perspective to that congressional process.

Knocking down the tariff barriers on most products over the next 10 years should, in the end, benefit consumers, manufacturers, and workers of both countries. We do fear, however, that significant nontariff barriers that will still remain could bar up to 80 percent of all American-made plywood from the Canadian market. Unless we act to remove those roadblocks, they could threaten to kill the spirit and intent of the treaty—at least as it relates to wood products—before it has a chance to work its greater good.

Plywood manufacturers in my home in the Northwest and in the southeast part of our country will be particularly vulnerable. Conservative estimates indicate that the inequities which could spring from this treaty would conservatively cost U.S. plywood manufacturers more than $125 million per year in lost revenues. Mills would close and plywood workers would lose their jobs.

As I'm sure most of you in this room are aware, current tariffs on either side of the border—20 percent in this country and 15 percent in Canada—virtually preclude any plywood trade between our two nations. Over the course of the 10 years following the treaty's ratification, these duties would gradually be eliminated. We fear, however, that an open market does not lie at the end of that road because of restrictions now in the Canadian national building code which would bar the use of up to 80 percent of the plywood made in this country from structural paneling purposes in Canada.

These crippling restrictions are not specifically addressed in the treaty, and while Canadian officials have stated their intent to consider the technical validity of their building codes, that is by no means a guarantee of any kind of relief from what many believe are totally unsupportable standards. At the crux of the issue is Canada's contention that American plywood is not suitable for use in the harsher Canadian climate.

I should point out here that our industry has long argued that the restrictions have no real basis in the performance of our plywood under various kinds of climatic conditions. We will hear testimony today from building materials experts that will emphasize that point.

The treaty does provide for a Canadian study of U.S. plywood products for use in home construction, financed through the Canadian Mortgage and Housing Corporation, which provides the exemptions for alternative building products. At best, this would open up only about 10 percent of their home-building business to U.S. products.

That's not good enough, but it's a start. We intend to ask witnesses from the Department of Commerce and the Office of the U.S. Trade Representative if the treaty contains the teeth to guarantee even this small improvement. Furthermore, we will ask how best to ensure a truly open market through implementing legislation.

The stakes are high. While our markets would be thrown wide open, U.S. producers could lose their chance to participate in a $300 million per year Canadian plywood paneling market. Perhaps, more importantly, a defective trade agreement that creates a closed market north of the border, and an open one in this country, leaves the door open to dumping of Canadian products in the United States. During times of market depression especially, this situation creates the threat of a downward product price spiral, mill closures, and unemployment.

Finally, it is no secret that some of this country's biggest panel manufacturers also have significant manufacturing capacity in Canada. If the trade agreement in its implementation creates stronger reasons for producing plywood in Canada, I think we can all guess where capital investment in new plants is headed when these multinational companies make their strategic decisions.

Before we begin hearing from our distinguished panel of witnesses, I wish to emphasize one last fact. Lest we be accused of protecting an industry that has become uncompetitive with the Canadians, or with any other nation's plywood industry, we should point out that tremendous efficiencies have been gained in our structural paneling business.

Last year this country produced a record 23.3 billion square feet of plywood, and we did it with 33 fewer mills than the total we had 20 years ago. In my home State of Oregon, where 30 percent of this Nation's plywood is made, we have seen the total number of plywood mills decline from 97 in 1966 to 55 plants last year. Many other plywood-producing States can tell the same kind of story with variances only in degree.

The point is, we have paid the price in expensive new plant investments, labor cutbacks, and in other painful ways to become more competitive in world markets. We should not be denied that opportunity now, in a trade treaty that only pays lip service to the concept of fair trade in plywood.

We are going to hear testimony today from Bruce Stevenson, a plywood mill owner from Washington State, and John Galloway, a Mississippi plywood manufacturer, on how these problems can affect relatively small producers. We will also hear from Bill Robison, president of the American Plywood Association.

Before we begin with our first panel, however, I would like to turn to my good friend and colleague from Oregon, Congressman Peter DeFazio, who I know has a strong interest in this matter and who may wish to make some opening comments.

The gentleman from Oregon.

Mr. DEFAZIO. Thank you, Mr. Chairman.

As you know, much of that plywood that you spoke about being produced in Oregon is produced in my district. My principal concern here is that the United States is being snookered again. We look at the most obvious things in our very unsophisticated way of dealing with international trade problems. This is a pattern that has been repeated again and again in dealing with the Japanese. They will reduce a tariff barrier, perhaps, but they'll erect five nontariff barriers successfully prohibiting U.S. products, particularly our wood products, from entering their markets while they continue to buy the raw materials from us.

In the case of Canada, it's a little bit different, but in the area of plywood, we're confronted with the same problem. We are about to open the U.S. market wide, with the cry of free trade. The unfortunate thing is, the standards that exist in Canada will effectively prohibit two-way free trade, so, we will have the typical one-way free trade which is otherwise known as protection on one side of the border and an open market in the United States. I believe this will cost us jobs and production here at a significant expense to my district and the State of Oregon.

So, I am here to strongly suggest that if we are going to open our markets, that we must also deal with these nontariff barriers, also. I don't believe they are justified in terms of the structural or other problems. They are, clear and simple, a market device to prevent U.S. firms from successfully entering the Canadian markets. We should not just deal with tariffs; we have to deal with the nontariff barriers.

Thank you.

Chairman **Wyden**. I thank the gentleman and very much appreciate his fine work on this issue as well.

The gentleman from North Carolina, we welcome him and appreciate his interest. Mr. McMillan, any opening statement you would like to make at this time?

Mr. **McMillan**. I have no opening statement.

Chairman **Wyden**. All right. Thank you very much.

At this time, two of our colleagues, Congressman Bob Smith of Oregon and Congressman Trent Lott, two Members also with a long-standing interest in this matter, would like their statements put into the record at this point. The Chair would like to ask that this be done.

[Messrs. Smith's and Lott's statements may be found in the appendix.]

Chairman **Wyden**. Our first witness today, a good friend of the subcommittee and a longstanding advocate for the forest products sector, is Congressman Beryl Anthony of Arkansas. Beryl, we welcome you and appreciate your interest. We will make a copy of your prepared remarks a part of the record in their entirety and welcome you for whatever statement you would like to make.

TESTIMONY OF HON. BERYL ANTHONY, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARKANSAS

Mr. **Anthony**. Thank you, Mr. Chairman. It is my pleasure to be here.

I would like to just summarize my testimony for you rather than reading it. Inasmuch as you have the prepared text, you can glance through it.

I think the record should reflect my partisan interest in this issue, Mr. Chairman. To begin with, there are eight southern pine plywood mills in the State of Arkansas. Seven of them are in the Fourth Congressional District, which I represent and have represented since 1979. One is in a county that I represented for 4 years, before I got redistricted out of that area. But looking at the trend line and the population growth lines, if I'm still in Congress in 1992, I'll more than likely regain that county and once again represent them. So, I personally have a constituent interest.

Arkansas also ranks fifth among the 24 States that produce plywood, so I have an additional economic as well as partisan reason for wanting to come before this subcommittee and tell you how I feel about the free trade agreement.

All of these plants are located in very small, rural towns. In fact, one of the plywood plants employs 340 people, and it's located in a town of 960 population. It has over $10 million in annual payroll. The industry in the State of Arkansas employs 5,000 people, 2,500 direct and 2,500 in indirect, transportation, logging, et cetera. So, in terms of the economic impact, it is very critical that this subcommittee take a close look at the free trade agreement—direct barriers as well as nontariff barriers.

Mr. Chairman, you and I fought this timber issue with the Canadian Government, I would say, for a good 3 straight years. It took us a considerable amount of time to get the Canadians' attention. It took us a considerable amount of time to get the administration's attention. But personally, I think we came to a good resolution of that issue in 1987, and I thought we had the issue behind us.

I'm on record as being supportive of the free trade treaty between Canada and the United States. I think it is best to have free flow of commerce between our two countries. I believe it is the only way to go in the long run. But, Mr. Chairman, I must tell you that I come before you somewhat concerned that, in the negotiation of the free trade treaty, it appears our long-fought efforts on the timber issue could be undermined. And why am I concerned about it?

True, the tariffs will be reduced over a 10-year period of time, and true, the free trade agreement did take into consideration the existence of a nontariff barrier in the form of a restriction on nonindigenous timber. This means that all southern pine which is manufactured in my district would fall within this classification. In addition, C–D grade plywood, which also falls within the definition of the product and comes out of my district, would be prohibited from going into housing in Canada.

The free trade agreement does state that over a period of time, housing financed by the Canadian government would have to drop this nontariff barrier. My studies show this only comprises about 10 percent of the housing market. Yet, on the other hand, their lumber would be able to come into the United States without any restrictions whatsoever. It would strictly be based on quality, on price, and on marketing.

This patently seems to me to set up an unfair situation—where over a period of time the Canadian timber would be allowed to come into all of our housing market and compete; yet, under the same agreement, U.S. timber would only be able to compete for 10 percent of their market. I just can't sit by and allow this to occur without urging a strong rewrite and a new look at this particular provision.

If the Canadian Government could be encouraged to go ahead and reduce this barrier for the remaining 90 percent of its housing market, then you would find no complaint from this Congressman. I don't believe you would find any complaint from the industry either, since competition would be restored to the marketplace; we would have to compete on the market; we would have to compete on price; and we would have to compete on quality of the product. We're all willing to shoulder that burden, but we're not willing to shoulder an additional burden of being frozen out of the market.

That, very simply put, is my argument. If you look at the region as a whole, getting away from my district and away from my State, southern pine now represents 51 percent of that market you've stated in your testimony, Mr. Chairman, which set a record 23.4 billion square feet of plywood made in the United States. So, it would also have an impact in your area, but as you can see, it would have an undue economical impact on the southern part of the United States. So, I ask your subcommittee to take a strong look at this treaty and make some good recommendations to the administration, and the witnesses who will appear before you later this morning.

I thank you for the opportunity to testify.

[Mr. Anthony's statement may be found in the appendix.]

Chairman WYDEN. Well, Beryl, thank you for your excellent testimony. As a member of the Ways and Means Committee, we just appreciate the chance to work with you, because I know you're going to have a chance to look at this there as well.

You have stated it so correctly. There are thousands and thousands of jobs on the line with respect to this part of the U.S-Canada free trade agreement, and the ripple effect, the jobs directly and indirectly affected, is staggering. You made the case very well, and I don't have any specific questions at this point. We really look forward to working with you to try to get a truly fair shake for the plywood industry in our country.

Mr. ANTHONY. Mr. Chairman, in terms of the ripple effect, 163 sawmills have shut down in my State over the last several years. We still have 393 operating sawmills, but all of those mills will be in serious jeopardy, if there's not a commensurate fair two-way trade implemented under the free trade agreement.

You are correct. I serve on the Ways and Means Committee, and we will have the opportunity to vote for or against this piece of legislation. I will also have an opportunity to direct questions to the people from your vantage point up on the podium. I plan to take full advantage of that opportunity when witnesses come before the committee.

Chairman WYDEN. We're glad to have you down there.

Let me see if any of my colleagues have any quick questions. The gentleman from Oregon.

Mr. DEFAZIO. No; I have no questions.

Chairman WYDEN. The gentleman from North Carolina.

Mr. MCMILLAN. Two quick questions.

We have a little plywood production in North Carolina as well. I think Weyerhauser produces there. It certainly doesn't compare with Arkansas. None of it's in my district. Nevertheless, I am interested, as one who comes from a long line of people who were raised in sawdust piles.

Let me ask you this. I didn't get the written testimony beforehand. Could you outline the justification for limiting, as I understand it, U.S. plywood exports to Canada to 10 percent of its domestic housing market? Is it on the basis of building standards?

Mr. ANTHONY. Yes; it is on the basis of building standards, Mr. McMillan. In the free trade agreement, there is a provision which stipulates that, if the Canadian Mortgage and Housing Corporation approve usage of this lumber in Canadian-financed houses, then the United States will remove tariffs on Canadian timber over a 10-year period of time.

You will find that the Canadian financed housing constitutes only 10 percent of the market. So, if you extrapolate, you can conclude that we're essentially frozen out of the Canadian housing market, unless the Canadians also eliminate this restriction in non-financed Canadian housing. My argument is that the CMHC will resist this total elimination because of internal pressures from the housing industry. So, we must put the pressures on here in the United States—the whole bottom line is to get two-way free trade. This is our pressure point right here, to continue to knock down that additional barrier.

Mr. McMillan. Would that same restriction apply to lumber as well as plywood?

Mr. Anthony. At the moment, I don't think that lumber is the problem. It's the restriction on C–D grade plywood, which is the construction grade plywood we produce in my State, and also the indigenous timber. These two restrictions need to be removed. My point, simply stated, is that these restrictions need to be removed, not only for Canadian-financed housing, but for all housing to be constructed in Canada.

Mr. McMillan. Would you explain a little further what you mean by indigenous timber?

Mr. Anthony. By indigenous, I mean it would have to be a species grown in Canada. It would have to be their type of fir; it would have to be their type of softwood. Therefore, the southern pine would not qualify, since it is not grown in Canada.

Mr. McMillan. Wouldn't the reciprocal for that be that the United States say our lumber products need to be indigenous?

Mr. Anthony. It would be, but——

Mr. McMillan. That would be fair trade, wouldn't it?

Mr. Anthony. Well, I guess that would be fair trade, but we have not sought to do that. In fact, the truth of the matter is that in the United States, when we have a very high housing market demand, the domestic market usually is not great enough to supply the timber needs. So, we do need some Canadian timber. The problem is, we don't need all of the Canadian timber down here.

Competition is good for us. We don't mind competition. We just don't want to be frozen out of the Canadian market.

Mr. McMillan. We ought to be able to do better than 10 percent.

Mr. Anthony. I would hope we would be able to compete at 100 percent.

Mr. McMillan. Thank you.

Chairman Wyden. I thank the gentleman and thank Congressman Anthony for his testimony.

Our next panel will be Ambassador Alan F. Holmer, Deputy Representative of the office of the U.S. Trade Representative, accompanied by Ann Hughes, Deputy Assistant Secretary of Commerce for the Western Hemisphere, Department of Commerce, and Dr. Erwin Schaffer, Assistant Director, Forest Products Research Laboratory, United States Forest Service. We welcome all of you.

We will make a copy of your prepared remarks a part of the record in their entirety. Why don't we begin with you, Mr. Holmer. If each of you could summarize your principal concerns here today, that will afford us some time for questions. We appreciate your cooperation.

Mr. Holmer, I want to note with special pleasure how good it is to see an Oregonian in that chair. We welcome you and thank you for your assistance. Please proceed.

TESTIMONY OF ALAN F. HOLMER, DEPUTY REPRESENTATIVE, OFFICE OF THE U.S. TRADE REPRESENTATIVE

Mr. HOLMER. Thank you, Mr. Chairman.

As one who was born in New York City and moved to Oregon when I was 11 days old, I think I have some special sensitivity to the subject of this morning's hearing.

What we hope to do this morning is I will make some comments overall with respect to the U.S.-Canada agreement. Then Ann Hughes will make some comments with respect to the plywood issue specifically, and then Dr. Schaffer will be available to address some of the technical issues that are raised by this overall question.

With your indulgence, Mr. Chairman, we have tried to make our written testimony quite brief. I have a summary of the U.S.-Canada Free Trade Agreement that we would like to make a part of the record, if we could.

We also have a list of about 10 pages, single spaced, of companies throughout the United States that have indicated their support for the U.S.-Canada Free Trade Agreement. Also, if I could, just one page of a resolution adopted 2 weeks ago by the National Governors' Association, including affirmative votes, I would note, by the Governor of Oregon and the Governor of North Carolina, among others. It was adopted by the National Governors' Association by a vote of 30 to 5.

Chairman WYDEN. Without objection, all of those materials will be made a part of the record.

Mr. HOLMER. Thank you, Mr. Chairman.

Last December I had the privilege of participating in a forum here in the Rayburn building on the U.S.-Canada Free Trade Agreement. It was sponsored by Senator Evans and Congressman LaFalce. Congressman LaFalce, in his concluding remarks, made the comment that essentially the U.S.-Canada Free Trade Agreement and its consideration in the Congress really was a battle over expectations, and if some on the Canadian side expected that they were going to be exempted from our dumping and countervailing duty laws, they were going to be disappointed. On the U.S. side, if we expected, for example, that all of our agricultural disputes were going to get resolved, or if the auto pact was going to be terminated immediately—well, that wasn't in the cards, either. I suspect that the issue as it relates to plywood probably fits into that category as well, in terms of expectations.

With respect to the agreement, if I could just hit the high spots very briefly. First, tariffs. As you know, the Canadians have tariffs that are substantially higher than ours. Canadian tariffs, on average, are about 9 or 10 percent; U.S. tariffs, on average, are about 3 or 4 percent. Those tariffs are all going to go down to zero. No exceptions. Actually, there is one exception, which I will get to later on, as it relates to plywood. But with the exception of plywood, in every instance, those tariffs are going to go to zero.

Now, what we found in 1985 was that the Canadian tariffs imposed a $1.3 billion cost on U.S. exports to Canada, and we think it's going to be of great benefit to U.S. exporters, including, Mr.

McMillan, in particular, the furniture manufacturers, U.S. paper exporters. Those tariffs are going to go down.

Investment. You will hear some complaints about a "lack of reciprocity" with respect to investment in this agreement. Well, I want to assure you, Mr. Chairman, we are one heck of a lot better off under the investment rules under this agreement than we are presently. Basically what you have now is, with respect to new green field investments in Canada, there will be no review of those investments at all. With respect to direct takeovers, there now is a threshold of $5 million for review by investment Canada of direct takeovers. That $5 million figure is going to go up to $150 million, in constant Canadian dollars.

What that means is, that while currently you have 7,600 firms in Canada that are subject to this kind of screening, that number will be reduced by 92 percent, so that only 600 firms will be subject to that kind of screening. Basically, what we have here is a protection that the Canadians will not go back to the restrictive investment policies that existed in the 1970's.

With respect to energy, we obtain nondiscriminatory access to Canadian energy supplies. We believe that cheaper and more secure energy will make U.S. industries more competitive, both in North America and around the world. We believe that helps consumers, not just individuals, but also businesses, both in the agricultural and in the manufacturing sectors.

With respect to services, both the United States and Canada presently have relatively open markets for services. This agreement locks that in. We also have relatively modest improvements in the area of agriculture. Most of the agricultural issues, the fundamental issues, have been pushed off to the Uruguay Round of Multilateral Trade Negotiations.

There are other provisions that we can talk about with respect to dispute settlement and automotive trade, alcoholic beverages, customs matters, Government procurement, product standards, and personnel movements. But I think the point that I would like to close with, Mr. Chairman, is that we use the word "historic" so frequently in this city that often it has become cliched. But it seems to me that if there ever was a historic trade agreement, this one is it. We believe that we must not allow this once-in-a-century opportunity to slip from our grasp.

Thank you, Mr. Chairman.

[Mr. Holmer's statement, with attachments, may be found in the appendix.]

Chairman WYDEN. Thank you, Mr. Holmer. We will have some questions in a moment.

Ms. Hughes.

TESTIMONY OF ANN H. HUGHES, DEPUTY ASSISTANT SECRETARY OF COMMERCE FOR THE WESTERN HEMISPHERE, U.S. DEPARTMENT OF COMMERCE

Ms. HUGHES. Thank you very much, Mr. Chairman. I would also like to have my prepared statement entered for the record.

Chairman WYDEN. Without objection, so ordered.

Ms. Hughes. I would like to review for the committee what the situation has been on plywood as it relates to our trade with Canada. This is a very long-festering problem, one that goes back at least 25 years. It is a problem that the U.S. and Canadian negotiators back in the Tokyo Round, a decade ago, tried to deal with, and tried to deal with in a way which would have resolved the issue.

Now, the crux of this problem has to do with how standards are set in both countries. We both use a system of private standards making—that is, private organizations. The American Plywood Association, the Underwriters Laboratory, for example, do testing and set standards for the industry. The Canadians do it in a similar fashion.

In the Tokyo Round, what the negotiators tried to do was to make the tariff cuts on plywood conditional on the two industries getting together subsequently and working out the problems that they had on plywood standards. So, they had agreed that, if that were possible, the tariffs on this product between the two countries could be reduced over a phasein period and harmonized at 8 percent. The U.S. duty is 20 percent, the Canadian duty is 15 percent.

So, this was agreed. A contingent concession was part of the Tokyo Round. The result, over the time that the two industries wrestled with this problem, was that they failed. They were unable to reach a compromise that would be acceptable to both sides on the standards that would govern the trade.

Just to show you how important this issue is, the United States has a market of $4 billion for plywood. We export $4 million worth to Canada, not of the construction grade that we're talking about now, but of other types of plywood. We import only $400,000 worth of plywood from Canada. So, plywood, essentially, does not move between the two countries.

Now, obviously, this has been a problem, an irritant between the two countries, and one that we set about to see if we could resolve in the context of the free trade negotiations. During our negotiations what we attempted to do was recognize the goal of the negotiators on both sides to totally eliminate tariffs on all products. This is what free trade means. So, with that requirement, we set about trying to find a way to address what is essentially an issue controlled by private interests in both countries.

We worked every step of the way with the American Plywood Association. We had them with us on numerous occasions when we dealt with the Canadians on this issue, advising us, and we were in contact with them during the closing moments of the negotiations. This issue was one of the last issues settled. The resolution of this concern was to try to find a way, within the control of governments, to address the issue, since our efforts during the Tokyo Round to leave resolution to the private sector had failed.

What we included in the agreement was a procedure whereby the Canadian mortgage authority, which is a government body, is reviewing an application by the American Plywood Association for approval in Canada for the use of C–D grade plywood. They are set to render their judgment on this application by March 15. If that judgment is negative, then the United States can ask for an impartial panel to be set up to review the judgment of the mortgage authority and decide whether it was unbiased and technically accurate. The U.S. and Canadian authorities will set up an impartial panel which will make a judgment. If that judgment is that the mortgage authority was fair and impartial, then the tariff cuts that are tied to this nontariff barrier would go into effect. If they decide that it's not, then the mortgage authority would have the responsibility to review its situation and adopt the finding of the panel, or it could continue as it has set out to do. If it did, then the United States would be free to prevent these tariff cuts from going into effect.

Now, this is a process which we think stands a good chance of working. It is the common practice in Canada that once the mortgage authority reaches a decision on a new material, finds that it is appropriate for use in construction in Canada, that inevitably that standard is adopted by the local building codes. So, it's a foot in the door, but it's a pretty big foot in the door and one that should lead to a process whereby not just 10 percent of the market should be open but the entire Canadian market should be open.

In closing, let me say that while we have worked with the APA over the course of the negotiations, we intend to continue to do so, to be sure that this process is carried to a fruitful conclusion. We will be working with the Congress in the meantime to make sure that happens. We think this is the way to go. We think it was a creative solution to what was basically a very difficult and intractable problem.

Thank you very much.

[Ms. Hughes' statement may be found in the appendix.]

Chairman WYDEN. Ms. Hughes, thank you.

Dr. Schaffer.

TESTIMONY OF DR. ERWIN L. SCHAFFER, ASSISTANT DIRECTOR, FOREST PRODUCTS LABORATORY, FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Dr. SCHAFFER. Mr. Chairman and members of the subcommittee, I would like to thank you for the opportunity to participate in this discussion this morning.

I would like to request that my testimony be made a part of the record as submitted. I will just paraphrase my input.

Basically, my testimony concentrates on, I think, the key nontariff aspect, and that is the applicable standards controlling the manufacture and use of softwood structural plywood in the United States and Canada, and code recognition of these standards and the conforming plywood. I will specifically focus on C–D plywood in that regard.

The Forest Service, in 1987, was asked to look at a submittal by the American Plywood Association to the Canadian Mortgage Housing Corporation [CMHC] for the approval of APA-trademarked C–D plywood with exterior glue. We reviewed that application as an unbiased Federal organization, which included the evaluation of engineering data and information, and found the APA application to be complete and technically sound for the purposes of consideration by the Canadian Mortgage and Housing Corporation.

Why was the Forest Service and the Forest Products Laboratory selected for this purpose? The Forest Service, and especially the Forest Products Laboratory, has been involved in research on wood panel and plywood technology since at least World War I, when it generated the technology that had input to the DeHavilland aircraft used in World War I. It contributed, over the many years right up to the present, to developing technology used in standards and codes on structural aspects of plywood.

What is it about our organization that makes it a little bit different than many? I said we advise, or we produce technology. As a result, our staff cooperates with organizations that are instrumental in the establishment of standards, such as the American Society for Testing and Materials. This information is also adopted by the American Plywood Association, along with its own material.

I might emphasize that the Forest Service, the Forest Products Laboratory, does not regulate or develop policy for the manufacture and use of structural plywood. Our role is to advise others on the technical aspects.

In the United States, all wood-based products used in construction must be approved by one of the three regional code organizations or by the local code organization having jurisdiction. These code approvals result in a published statement of recognition, such as the National Evaluation Report.

In Canada, the procedures are not identical. Even though we're not as well versed in how the Canadian building codes operate, we are aware of some of its aims and functions. Whereas the U.S. code organizations largely limit their regulations to those that directly affect the health, safety, and welfare of occupants or communities, the National Building Code of Canada also provides a bit more attention to the comfort of its occupants and emphasizes what we might say is an enhancement of quality in construction detail. To that degree, it is well above requiring basic protection of the public from hazards, which our codes largely focus on.

The Building Code of Canada relies upon standards for procedures and products developed under Canadian Standard Association, and these standards, if related to use in construction, are referred to in the National Building Code of Canada as their way of accepting those standards for use.

The code-recognized standards, both in Canada and the United States, have two attributes. In the United States we have two types of standards that contribute to use. One is a specification type and second is a performance type. I think it's very important to distinguish between the two types because of the aspect that affects manufacture and use.

A performance-type standard defines regulations in terms of the desired results to be achieved and really omits stating the methods of achieving the results. That is, it wants to reinforce how panels perform and attest to the performance of those panels. A specification-type standard specifies the exact materials or methods of construction that must be used for a given purpose. The desired results are not stated, as it is assumed that the manufacture, if it's so specified, will result in an adequate performance.

The basic point here is that these standards differ in how end product quality and conformance are addressed. In that sense, the

Canadians largely only recognize specification-type standards. Their standards are based upon specifying the materials to be going into the panels, and conducting tests to assure that the materials and the bond quality in the panels come up to some criteria specified. They do not recognize performance-type standards—that is, those standards that really check the end performance of the panels right off of the manufacturer line.

We have looked at the differences between the Canadian and U.S. sheathing-grade plywood standards, particularly the specification type, which are the only two types that the two countries have in common. Basically, the Canadian specification-type standards do not allow D-grade veneer to be used in their panels. They allow only C-grade faces and backs, whereas the United States does allow a C-grade face and D-grade back. In that sense, the specification-type standards differ in their content.

If I could just summarize and conclude by indicating that the United States relies upon code-recognized performance and specification-type standards to assure the quality of sheathing-grade structural plywood. Canada, however, only employs code-recognized specification-type standards. We think that there may be property differences between Canadian and U.S. specification standards for plywood, but they have not been quantified. It is doubtful whether they are substantial.

I think, with that, I will conclude my comments. Thank you.

[Dr. Schaffer's statement may be found in the appendix.]

Chairman **Wyden**. Dr. Schaffer, thank you, and I want to thank all our witnesses. I will have some questions, and I know my colleagues will as well.

We want to recognize our friend from Washington, Mr. Chandler, who is not a member of the committee but has had a long-standing interest and has worked very hard in this area as well. I would ask if there are any comments you would like to make at this time.

Mr. **Chandler**. Thank you, Mr. Chairman. I have just submitted a statement for the record and will allow that to stand.

[Mr. Chandler's statement may be found in the appendix.]

Chairman **Wyden**. I want to thank the gentleman and note that he is a member of the Ways and Means Committee as well, and someone who has always gone to bat for our Northwest interests. We look forward to working with you as a member of that committee as well.

Let me begin with a question with respect to the technical issue, Dr. Schaffer. There is no question in your mind that our CDX plywood can stand up to the climate in Canada; isn't that correct?

Dr. **Schaffer**. I have no reservations on that. The end-use conditions in Canada are very similar to those in the United States.

Chairman **Wyden**. So, there is no question that, from a climatic standpoint, our plywood isn't going to give way to rain, people aren't going to fall through the floors if it's used in housing, and that sort of thing, right?

Dr. **Schaffer**. You're correct, sir.

Chairman **Wyden**. Mr. Holmer, let me begin, if I might, with you. I think you all have been candid with us in saying that this does not remove the inequity and doesn't remove the problem.

Do you all favor trying to get a fairer shake for our plywood interests as part of the implementing legislation that Congress will be considering?

Mr. HOLMER. Have I stopped beating my wife, Mr. Chairman?

We think that the plywood interests have gotten a fair shake in the U.S.-Canada free trade agreement, and we can go into greater detail as to why we believe that's the case. But we certainly want to work with you, Mr. Chairman, and members of the subcommittee, members of the Ways and Means Committee, and other congressional committees, on the implementing legislation. We want to work with the American Plywood Association as well, to try to make sure that, to the extent possible, consistent with the agreement, that we're able to address concerns that they and you may have.

Chairman WYDEN. Well, I find it hard to see how plywood is getting a fair shake when it only gets access to 10 percent of the market. The comment was made that it's a foot in the door. Well, there are absolutely no guarantees of anything more. If there were, it would be another story. I just am curious about whether or not we're going to use this additional bargaining chip, the implementing legislation, to try to do a bit better by our interests.

Mr. HOLMER. Well, let me respond in a couple of ways.

First, this has been a problem for at least 25 years. It has been one that the U.S. Government has attempted to resolve with the Canadians for at least 10 years. It is difficult, for the reasons that Ms. Hughes has described, because these were voluntary industry standards that are issued by the private Canadian standards association.

We believe that this 20 percent does provide a meaningful foot in the door. We believe that if the Canadian mortgage authority makes an affirmative determination, it will remove for Canadian plywood exporters the argument that they now use in third country markets, where the market is much larger than it is in the United States or in Canada, to take away the argument that they use in advertising, that well, they shouldn't buy the U.S. product because the U.S. product can't be sold in Canada. That argument is going to be taken away if the Canadian mortgage corporation makes an affirmative determination. So, we believe that foot in the door really is meaningful, both with respect to the Canadian market and with respect to third country markets.

Chairman WYDEN. Up to now, and for more than a decade, it has been our position that we should have entry into 100 percent of this market. Now we're settling for 10, or I think you used 20. I think the industry feels that it's 10. Why are we settling for 10 now?

Mr. HOLMER. Well, I would submit, Mr. Chairman, that we're not settling. Certainly with respect to the linkage with the tariff, the tariffs will be removed if the Canadian mortgage corporation does make the right decision, if they make an affirmative determination. But we will continue to press vigorously after that determination for there to be further improvements in U.S. access to the Canadian market. We believe we will continue to have leverage during those discussions.

Chairman **Wyden**. I can't help but noting, though, that we're still reversing our position, the position we've had for more than a decade, that I'm particularly concerned about. I wonder what was the "quid" the U.S. Government received from the Canadian Government for reversing our position on this issue.

Mr. **Holmer**. The "quid" was that they agreed to the process that we have outlined relating to the Canadian Mortgage and Housing Commission; the fact that if that commission makes a negative determination, there will be an opportunity for us to have that decision reviewed by an impartial panel.

I should note, Mr. Chairman, that we've had a very cooperative relationship throughout this process with the American Plywood Association. As Ms. Hughes indicated, they were included at every stage of the negotiations. They were even at the negotiating table in June when this proposal was outlined. The final deal was only made after we obtained advice from the American Plywood Association. We think that this is a very reasonable outcome based on U.S. plywood interests.

Chairman **Wyden**. Are there any other U.S. industries that suffered a similar reversal of a long-held U.S. Government position regarding the elimination of tariff or nontariff barriers against U.S. trade?

Mr. **Holmer**. Well, I think I probably should review that and submit something in writing for you. I know, for example, that the telecommunications equipment manufacturers had some procurement concerns that they wanted to have addressed, and tariffs in telecommunications have gone down. I would assure you, though, Mr. Chairman, there is only one tariff where there is linkage to nontariff barriers. Every other tariff across the board is going to go down to zero, except plywood, and we held out plywood because we wanted to ensure that that tariff on the U.S. side was not going to go down to zero until we had a favorable result from the Canadian Housing and Mortgage Corporation.

Chairman **Wyden**. Then the answer to my question is yes; that plywood is the only industry that has suffered this kind of reversal?

Mr. **Holmer**. No; I mentioned telecommunications. I indicated I would be happy to respond in writing if there were others.

Normally, the way it has worked through six rounds of tariff negotiations that we've had over the course of the last 30 years, tariffs have come down; in many instances not all the way down to zero, but they have come down. In many instances, nontariff barriers have not been addressed. The United States—I guess I would just leave it at that.

Chairman **Wyden**. Ms. Hughes, are there other elements of the treaty that ensure opening the remaining 90 percent to the Canadian market?

Ms. **Hughes**. Well, as you pointed out, we don't have a guarantee. What we have is a process that we think will lead to the opening of that market. We know that the pattern in Canada is, once the housing authority accepts a new material, that it is incorporated into the local building codes. We intend to keep our attention on this issue as the U.S. Government, and we will be watching to make sure that it happens in this case.

No; there are no guarantees, but we're satisfied that the process stands an excellent chance of being successful. If it doesn't, we have a dispute settlement process in the agreement which will allow us to address the Canadian Government on this issue.

Chairman **Wyden**. Let me recognize my colleagues, and then I'll have some more questions. The gentleman from Oregon, Mr. DeFazio.

Mr. **DeFazio**. Thank you, Mr. Chairman.

Sometimes I just like to listen to the language of the responses. Mr. Holmer said, to the extent possible, consistent with the agreement, we have don something. I question that at some point what we're negotiating for here, whether we are truly addressing the problems of trade between the two countries to get to truly free trade, which I think most people in this room and most Americans would support, or if, indeed, we are setting ourselves up for something that has the appearance of free trade but has the inherent defect of the continuation of a barrier against U.S. products, and in an industry where I believe we have become more competitive.

There has been significant investment in our industry on our side of the border in plywood. We've had a shakeout in that industry, and I think we are competitive and could do well in their market. But that concerns me. We're working within the framework of the agreement, and there are, perhaps, some contradictory philosophies there.

I would hate to just characterize the administration, but I would note that in the last 7 years we have become the world's largest debtor nation, while we have talked about free trade the whole time and have done precious little to negotiate away barriers with other nations. I am concerned that we're again headed toward a problem here. I see that as a very qualified protection, "to the extent possible, within the context of the agreement." That's just an observation and obviously not a question.

Mr. **Holmer**. Could I respond, Mr. DeFazio, very briefly?

Mr. **DeFazio**. Sure.

Mr. **Holmer**. First, with respect to foreign unfair trade practices, I would submit—and I would be happy to do so in writing as well—the last 3 years of this administration we have had, without compare, clearly the most aggressive program of any administration to go after foreign unfair trade practices. I could cite dozens of examples for you, where this administration has taken aggressive actions, including for the first time in history, self-initiating a whole host of actions under section 301 of our trade laws. I really would submit that it's been a very aggressive posture.

The second comment that I heard, I did say, with respect to implementing legislation, that any legislation was going to have to be consistent with the agreement. That's going to be a rock solid position that you're going to hear from the administration, and I would hope from the Congress, throughout this process. We're willing to talk about implementing legislation, but it is going to have to be consistent with the agreement.

Third—and in a sense this goes back to the comments that the chairman was making—we do not regard this in any way as being a reversal of the desire that the U.S. Government has had for at least the last 10 years of attempting to address a problem that's been around for the last 25 years. We still want 100 percent access to the Canadian market.

There was linkage in the Tokyo Round. That linkage didn't work. U.S. plywood exporters didn't get any increased access to the Canadian market, and we're now trying a new approach that we believe has a strong prospect of being able to be ultimately successful.

Mr. **DeFazio**. Wouldn't it be consistent to get the Canadians to agree that they would drop all tariff and nontariff barriers to plywood, that, in fact, as Dr. Schaffer said, it's not a health safety issue—and then he talked about esthetics.

I don't know. Maybe the Canadians are now using plywood for finished exterior on their houses. I don't think so. So, the esthetics of underlayment, or something that's underneath the singles, or siding, or something else, it seems a little odd to me that we're particularly concerned about the esthetics. Perhaps we don't want to offend the delicate sensibilities of the carpenters who are hanging the stuff. But the Canadians have to admit that's not the reason that they have these standards. The reason they have these standards is because in this country we're producing plywood that doesn't meet those standards. It would require a significant change in the way we produce plywood. So, why not get them to agree to drop them? Just say OK, fine, you will get access, when and if you drop all barriers. Otherwise, no; no access. We will maintain our present tariff barriers; we'll strengthen them. This is a significant impediment, 10 percent of their market for free access to our market. I see a lot more mills closing in my district.

Well, we have a different philosophical viewpoint on this. I think we're going to come back later—they're promising oh, yeah, we'll look at these standards, and they'll come up with some standards. You talk about the success of what we did on tariffs. What was the success? At the last minute we caved in and said OK, you can levy the 15 percent on your side of the border, and you can back door it into your industry or into investment in your forests, and you can continue to subsidize your wood products in Canada—I mean, that was a fairly unprecedented concession. Now, of course, a further part of the agreement was we're going to allow them to rework their stumpage and other prices in very complicated ways and even drop the 15 percent on the softwood lumber issue. I realize that's not the issue here. But I hold that the United States has not taken a firm and consistent position to open foreign markets. I don't know why. I remain puzzled.

With that, I would yield back my time.

Mr. **Holmer**. Could I——

Mr. **DeFazio**. I certainly see no explanation for a position that says access to 10 percent of their market is worth 100 percent of ours. But if Mr. Holmer does have an explanation, the Chair and my colleague are anxious to hear him.

Mr. **Holmer**. Well, good. There are a whole host of issues that were raised.

One, softwood lumber and softwood lumber exports—the softwood lumber memorandum of understanding, widely supported by the U.S. industry, is basically set aside with respect to this agreement. That memorandum of understanding will continue, and my understanding is the industry and your constituents are pleased with that.

If there's a negative decision by the CMHC, and if then Canadian tariff continues, and if somehow there are subsidies that are provided to the Canadian industry, we still have our countervailing duty law which is retained in the agreement, and we can address those problems of Canadian subsidies through the countervailing duty law the way that Ms. Hughes' Commerce Department did in the softwood lumber case, again I think to the widespread satisfaction of the softwood lumber industry and your constituents.

Mr. DeFazio. I would just say it's a little more complicated than that. I met on the interparliamentary group with the Canadians and had extensive discussions on this issue. They are going to adopt a province-by-province policy; that is, the United States Government is going to have to monitor what each and every province in Canada is doing to comply. As they drop the 15 percent barrier, they're going to rearrange the stumpage prices in one province, and in the next province they're going to do something else, and in the next province, something else.

I don't think we have the capability and monitoring to enforce that. I would be real interested to have a followup from your department or others in terms of how we are monitoring on a province-by-province basis all these rather complicated changes in stumpage and that which are fairly difficult to explain. Month by month the residual woodchips change, the way they let the contracts. There is a lot of concern.

We speak of the industry as a monolith, or the plywood association as a monolith, that somehow represents all views of all industry. It's not so. In fact, there is tremendous concern residual in the Northwest over this issue.

Mr. Holmer. Ms. Hughes had a response to that issue.

Ms. Hughes. Yes; I would just like to say the Department is monitoring what's going on in Canada and is in the process of reviewing, province-by-province, proposals that are made by Provincial governments for changing their programs.

I would just like to point out that in British Columbia, which is the province which produces the majority of plywood in Canada, the plan to change their stumpage system in order to eliminate the 15-percent export charge has resulted in an increase in costs which we consider legitimate, of $500 million United States on the industry in British Columbia. That is spread across the entire industry, including the plywood industry which has to bear that increased cost as well as the lumber industry. So, it should result in a fairer competitive relationship between the plywood manufacturers in Canada and in the United States.

Further, I would like to say that if you would like for the Department to make a presentation to you on our monitoring of the program, we would be delighted to do so. We have been working very closely with the U.S industry that is interested in the lumber issue, and we believe that they are satisfied with the process as it's proceeding.

Mr. DeFazio. I would be happy to receive that. I'm particularly interested in the changes in stumpage, the $500 million you mentioned, over what period of time, relative to what volume, and so on and so forth.

Ms. **Hughes**. We would be happy to. That's an annual figure.

Chairman **Wyden**. We'll have an additional round of questions. I want to recognize our colleague, Mr. McMillan.

Mr. **McMillan**. Thank you.

I would like to be included on a presentation of dealing with that subsidy issue. Is that being carried out pursuant to the memo of understanding that you referred to?

Ms. **Hughes**. Yes; it is.

Mr. **McMillan**. Could you also circulate a copy of that memo of understanding?

Ms. **Hughes**. We would be happy to.

Mr. **McMillan**. I would like to see that because I think that sort of gets to the root of the issue. Timber, admittedly, is an extremely important resource in Canada, and that's one of the fundamental issues we're dealing with here.

I'm not sure I got an answer to my question earlier, and perhaps it applies to practice or to standards. But the requirement for the use of indigenous timber, is that written into the standards as currently apply to C-D grade plywood in Canada?

Dr. **Schaffer**. As you know, Canada doesn't produce C-D grade. They produce C-C grade.

Mr. **McMillan**. OK. All right.

Dr. **Schaffer**. They do prefer indigenous species, of which some are ours as well.

Mr. **McMillan**. When they say prefer, is that a matter of written standards or is it——

Dr. **Schaffer**. They have it specified in their standard.

Mr. **McMillan**. So, when we start negotiating, they'll have to begin with indigenous, because if we can't get around the indigenous issue——

Dr. **Schaffer**. We share some of the same species.

Mr. **McMillan**. So, they then would define indigenous as including some species that grow in the United States?

Dr. **Schaffer**. I would assume so.

Mr. **McMillan**. But you would assume it would not include southern pine.

[Laughter.]

Dr. **Schaffer**. That's a good assumption.

Mr. **McMillan**. It would include what, fir?

Dr. **Schaffer**. Douglas fir, larch, ponderosa, the Pacific Northwest species.

Mr. **McMillan**. Do you believe that's just a matter of convenience, or do they really think that southern pine does not meet certain standards that they would require?

Dr. **Schaffer**. Because they don't have any southern pine, they don't have any experience with its manufacture and end properties. I doubt whether they would question that it could be produced to perform.

Mr. **McMillan**. Is southern pine generally accepted in the United States?

Dr. **Schaffer**. Absolutely.

Mr. **McMillan**. Would it be competitive, economically, on the Canadian market?

Dr. **Schaffer**. I would suspect it would perform well. Economics is tied to the shipping costs, by and large. Shipping costs control a lot of our pricing structure throughout North America. I think it would have difficulty achieving a competitive base in Canada.

Mr. **McMillan**. Well, I know conditions can change. Stumpage prices change, subsidy changes, and so forth, which would influence its competitiveness. But are we, in pragmatic terms, insofar as southern pine is concerned—I'm not addressing the issue of other northwestern species—are we talking about something that really has very little economic consequence to the southern pine plywood producer, or is there a ripple effect in terms of what happens to northwestern products that might indirectly have an influence on southern pine plywood products?

Dr. **Schaffer**. It's a policy question, and I don't feel well equipped to be able to deal with that one. However, we would want to have any of our plywood recognized to conform to the Canadian standards as well as code usages. Why restrict it on a basis of species when we can show that the performance of these species in plywood is acceptable for all of our end use requirements.

Mr. **McMillan**. I'm not arguing with you.

Dr. **Schaffer**. No; I understand.

Mr. **McMillan**. I'm not advocating that it be excluded. I'm just trying to get to the core of it.

Thank you. I think that ends my questions.

Chairman **Wyden**. Would the gentleman from Washington care to ask any questions?

Mr. **Chandler**. I think not. I just wanted to appear today, Mr. Chairman. We'll be holding hearings, of course, in Ways and Means as well.

I would just like to comment that this one feature of the bill was a disappointment to those of us in the Pacific Northwest. I think we need to remember what a tremendous success the overall trade agreement was, and especially for the Pacific Northwest. Now, if we could do something with that southern pine, Mr. Chairman, and keep that out of the market, then we would really have something.

[Laughter.]

Chairman **Wyden**. The gentleman is always welcome here.

Mr. **DeFazio**. Perhaps we could adopt Canadian standards, which would mean that southern pine would become, basically, not known.

Chairman **Wyden**. Extinct.

[Laughter.]

Chairman **Wyden**. We're in this together.

Let me, if I might, go back to this agreement. Particularly what concerns me is the lack of guarantees, that we're ever going to get anything more than 10 percent under the scenario the administration lays out, Ms. Hughes. That's what I find the most distressing. You keep talking about having a foot in the door, and, frankly, I think we're not getting more than an inch, and really not getting what we need by way of a process for the long term.

Now, I note in chapter 6 of the agreement, it says the provisions of this chapter shall not apply to any measure of a Provincial or

State government. Accordingly, the parties need not ensure the observance of these provisions by State or Provincial governments. The bulk of the building codes, these disguised barriers that we're so concerned about, are Federal and Provincial standards, are they not?

Ms. **HUGHES**. Yes; they are.

Chairman **WYDEN**. So, in fact, despite your legitimate concern over interfering with private standards, the Canadian Standards Association, the standards are actually Government, correct?

Ms. **HUGHES**. Yes.

Chairman **WYDEN**. Then this still is a government-to-government dialogue.

Ms. **HUGHES**. The building codes are Government, but they are based on the private standards.

Chairman **WYDEN**. But this still is a question of it now being a governmental matter, something that could be resolved by a government-to-government dialogue.

Ms. **HUGHES**. Exactly. That's why we tried this new approach of involving the Canadian Government to the maximum extent we could.

Chairman **WYDEN**. Well, let us return then to the question of how we're going to get a genuinely fair shake for our plywood people.

Mr. Holmer, what do you envisage in the implementing legislation, which I feel really is the last bargaining chip, that would help to bring about a truly fair shake for our plywood industry interests?

Mr. **HOLMER**. That's obviously a subject that we're going to want to meet with you and others about, and work with the Ways and Means Committee on. This is going to be a draft that's going to be written by the Congress. We will want to have a chance to respond to whatever it is that comes out of the congressional drafting process.

Chairman **WYDEN**. I would like your suggestions at this time, because this was the treaty negotiated by the administration. It was the administration that, as you heard me state earlier, said that 10 percent was a foot in the door at this time.

Mr. **HOLMER**. Right.

Chairman **WYDEN**. I don't think it's enough. I would like your suggestions, or at least some general ideas, of what you think might be part of the implementing legislation that the administration could support and would get us a fair shake.

Mr. **HOLMER**. OK. That's a fair question. I'm not in a position to be able to respond to it this morning. But basically where we are, Mr. Chairman, we've been attempting to respond to the congressional timetable and the congressional priorities. Those priorities and timetable focused on the Omnibus Trade Bill during this most recent time period. As soon as the Congress moves to Canada in consideration of the Canadian agreement, we'll be in a position to be able to be responsive to that as well.

Chairman **WYDEN**. But you must have given this subject some thought. I know, because you've even worked with our staff on it, and we appreciate your cooperation.

What possibilities might there be for language in the implementation section of this to get us a fair shake?

Mr. **Holmer**. Well, presumably, there is language in the implementing legislation that indicates that tariff cuts on the U.S. side don't go into effect, or that we retain the right for those not to go into effect, unless there's an acceptable resolution by the Canadian Mortgage and Housing Commission. Presumably, there's also something in the implementing legislation relating to the panel, this impartial panel, that would be able to review the results of that commission. Those are certainly two areas, it seems to me, where there will be implementing legislation that's going to be required.

Whether there is anything beyond that which might be useful, I'm just not sure at the present time.

Chairman **Wyden**. Mr. Holmer, what would you think of a provision within the language of the agreement that mandates that at the end of the third year of tariff reductions, that before further reductions take place, the Federal Government, through the Department of Commerce and the Trade Representative's Office, make an assessment and a verification that the Canadians have acted in good faith and that they are progressing satisfactorily in this effort to have a performance-based standards system on plywood?

Mr. **Holmer**. What you're saying is tariff reductions in years 3 through—this assumes that there has been an affirmative decision by the Canadian Housing and Mortgage Commission and that the tariffs have started to phase out, but the phaseout from years 3 through 10 would be held up, conceivably?

Chairman **Wyden**. No; why don't we just state that at that time, before further reductions, there would be a verification process that would indicate the Canadians have acted in good faith.

Mr. **Holmer**. Well, I guess what I'm a little hung up on is your phrase "before further tariff reductions." I think, certainly, careful review by the U.S. Government and verification of the progress that has been made, and a report of that to Congress—and again, you're hitting me a little full, and I'm not in a position to be able to commit absolutely for the administration. But it seems to me that's something we could take a careful look at.

Chairman **Wyden**. Well, I think what you're saying is helpful, and that's what I'm interested in. I'm looking for something that could be within the spirit and intent of the treaty. Why don't we just say, for purposes of trying to lay this idea out in concept, you would not object at this time to the idea that after 3 years there would be an assessment process to make sure that the Canadians were really moving in good faith; in concept, you would have no problem with that?

[Witness confers.]

Mr. **Holmer**. I think, Mr. Chairman, that's something we could take a careful look at and review for possible inclusion in the implementing legislation.

Chairman **Wyden**. OK.

Mr. **Holmer**. But again, if I could just emphasize, I'm not in a position to be able to commit the administration to anything on that this morning.

Chairman Wyden. I understand that. I wanted to just lay the concept out in a general way. I think you can see what I'm most concerned about is that I don't think there are adequate procedures in place to really ensure that we're going to get access to more than 10 percent. I really fear that, with a $300 million market on the line, that unless we have further guarantees to get more than that 10 percent, we are missing out on a good part of our economic future in this country. I just don't want to see this train leave without a procedure in place to get us more than that 10 percent.

But you have at least said you would be willing to look at some kind of concept to ensure that we don't just say well, for 10 years, that's that, whether or not they make any effort to act in good faith. We are interested in working with you on that.

The gentleman from Oregon.

Mr. DeFazio. I would just like to follow up with Dr. Schaffer.

In your testimony on page 5, in commenting on Canada's national building code, et cetera, you talk about the fact that "we understand that a performance-type Canadian plywood——

Chairman Wyden. If I could just interrupt the gentleman, if you all want to take——

Mr. Holmer. I'm here for the duration.

Chairman Wyden. If you would like, why don't you have your associate come on up. I just think our colleague wanted to direct a question to you.

The gentleman from Oregon.

Mr. DeFazio. It's Dr. Schaffer I was directing it to.

"We understand that a performance-type Canadian plywood standard has been developed and is under review. However, we are not aware of the exact nature of the standard."

I guess we're aware it's been developed, and it's under review, but we're not aware of the exact nature; is that it? That's mostly held secret, or is in flux, or why are we not aware of the exact nature?

Dr. Schaffer. I think it's just simply that we haven't received a copy for review purposes. The Canadians are often quite good about asking advice on standards from the U.S. Federal sector, and we just haven't received a request or the opportunity to review it. I don't believe it's anything that's secret.

Mr. DeFazio. OK. Well, I guess that's fairly critical to the discussion we're having here.

Dr. Schaffer. Yes; I understand.

Mr. DeFazio. What's the time line here? When did they develop the draft policy? I mean, just this week, or last week?

Dr. Schaffer. I believe they've been talking about it on the order of 4 or 5 years. But their progress has, obviously, not been substantial.

Mr. DeFazio. Glacial, I would think.

Well, I would hope that you would make an effort to get a draft of it and provide the committee with a comment on their draft, and see if it addresses any of the concerns we're expressing here, or whether it might even impose further problems. It just seems it would be fairly simple to make the request, and maybe we could avoid a lot of this conversation this morning if we saw a draft policy that would have allowed U.S. plywood in. Then we could say we strongly support that, and urge you to support it, and lobby our Canadian friends.

Second, back to the question to Ambassador Holmer, just to reinforce the point my colleague was making there. As I understand it, our position is—and Dr. Schaffer, I think, has underscored this—there is no technical justification to restrict our CDX plywood into their market. It's not technically justified.

Mr. HOLMER. That's my position.

Mr. DEFAZIO. The letter from Ambassador Yeutter to Chairman Wyden says, "We were not totally successful. The only exception is in plywood and particleboard products, where we agreed that our tariffs would be phased out only if Canada agrees to remove barriers for which there is no technical justification." That's a trade barrier. For what other purpose does it exist?

Mr. HOLMER. I hope you don't expect me to justify the Canadian practice.

Mr. DEFAZIO. Right. But I'm just saying I would hope that we can hold the line there and say this is a trade barrier; this is hanging up this section. This is going to cause problems in the United States Congress. You have no justification to maintain this barrier. If you are truly wanting us to lower the barriers, you've got to lower yours. We've got to be firm. There is just no technical justification. It's whimsical. Either that, or it does have a market purpose, or it has to do with some strange set of esthetics which is present in Canada and not here for people who construct houses.

I yield back.

Chairman WYDEN. I thank the gentleman.

The gentleman from North Carolina.

Mr. MCMILLAN. I don't know if anyone can get this in perspective, but in just following on with the last comments, to what degree is Canada dependent upon the United States in terms of selling its timber output, broken down, say, by softwood lumber? You stated plywood is insignificant. But what percentage of the Canadian softwood lumber output is exported to the United States?

Ms. HUGHES. It's a very substantial portion, probably the majority, but we would like to submit that data for the record.

Mr. MCMILLAN. Probably in excess of 70 percent? OK. I wish you would supply that information. I would appreciate it. Thank you.

Chairman WYDEN. Well, I'm not going to ask any further questions, Mr. Holmer, but I want to note one thing that particularly concerns me.

I have been with the administration on every single trade issue since I've been in Congress—domestic content, on automobiles, stood with the President on the textile matter, the question of veto override, the Gephardt amendment, and the list goes on and on. But when I see a provision like this, as it applies to plywood, where they get access to all our market, and we get access to 10 percent of theirs, I think a provision like this feeds red meat to the protectionists. I really do. I think this is something that gives them new ammunition, because they can point to this, and they can say it's a $300 million market, and stand up in front of a bunch of people and say they get access to all ours, and we get access to only 10 percent.

Now, Dr. Schaffer, when we started, admitted there was no technical justification for this, there is no reason on the basis of climate or that houses are going to fall apart. You heard me note that there are no guarantees here that we're going to get more than 10 percent. You heard me note how it affects the Provincial governments; we don't have any leverage there.

I just want to say in concluding this panel that I think we've got a tremendous amount of additional work to do. I want to do it with you. You have been candid in saying that you would look at this additional procedural guarantee. I really feel strongly about the concept of trying to build into this agreement some additional procedural guarantee which will give us a vehicle for getting more than 10 percent, whether it's this idea that I threw out about after 3 years there would be some assessment of whether or not progress was being made, or something else. Let's go forward now in the implementing language and really get some more out of this. I'm for free trade, and this doesn't look, smell, or act like free trade to me. This looks like something that is going to hurt American industry and cost American jobs. As a Member of Congress from the timber part of the world, I can't support that.

Unless you all have anything further, we will excuse you at this time.

Mr. HOLMER. We look forward to working with you, Mr. Chairman.

Chairman WYDEN. Thank you all.

We will have our next panel come together. William T. Robison, president of the American Plywood Association; John Galloway, president of Hood Industries; Mr. Bruce Stevenson, president of Bingen Plywood Co.; and Thomas R. Flint, director, technical services, American Plywood Association.

Gentlemen, we welcome you all to the subcommittee. Let us say right at the outset that we'll make a copy of your prepared remarks a part of the record in their entirety. Why don't we begin with you, Mr. Robison, representing the American Plywood Association from Tacoma.

TESTIMONY OF WILLIAM T. ROBISON, PRESIDENT, AMERICAN PLYWOOD ASSOCIATION

Mr. ROBISON. Chairman Wyden and members of the committee, my name is William Robison. I am president of the American Plywood Association, and we represent over 75 percent of the U.S. softwood plywood production. We appreciate this opportunity to appear before you today and discuss the serious consequences that the free trade agreement poses for our industry and many small businesses that produce plywood in the United States.

The U.S. softwood plywood industry consists of 67 firms who employ about 29,000 workers, in 143 plants in 19 States. In addition, tens of thousands of other workers are indirectly employed by our industry in logging, trucking, and other related activities. Of the U.S. plywood firms, 55 are small businesses, or about 82 percent. They are particularly important in small communities located throughout the South and Pacific Northwest.

Currently our industry is alive and efficient, but today I am here to discuss a serious problem. In a nutshell, the free trade agreement with Canada, by eliminating high plywood tariffs, would open our market to Canadian plywood producers, as it should, but unfortunately, the agreement does not remove most of the nontariff barriers to the use of U.S. plywood in Canada. Therefore, our market will be open to Canadian producers, but the vast majority of Canada's construction market will be closed to us. The results could be disastrous for the U.S. plywood industry.

I would like to make this important point right here, Mr. Chairman. Our industry does not oppose the free trade agreement, but we do feel strongly that the unfair Canadian nontariff barriers to our plywood can and must be eliminated if the tariffs are eliminated.

Currently, as has been noted here, the United States imposes a 20-percent tariff on plywood imports, while Canada imposes a 15-percent tariff on plywood imports. Thus, there is little plywood trade between the two countries. Further, Canada maintains substantial nontariff barriers. These barriers prevent the use in Canadian construction of plywood made with D-grade veneer or with southern yellow pine. These restricted products represent over 80 percent of U.S. production.

To date, Canada has refused to adopt either Canadian standards based solely on performance, or to accept U.S. standards that would allow our plywood to compete in Canada on the basis of its strength and durability. Rather, Canada maintains a prescriptive limitation on the use of plywood made with D-grade veneer and plywood made from trees which are not indigenous to Canada.

Therefore, our plywood is not permitted in Canadian construction, despite its demonstrated performance for the last 30 years for exactly the same construction applications in the United States and most of the rest of the world.

Incidentally, Canada is the only country in the world which has consistently, over time, denied our application for acceptance of our products. In other words, the Canadian standards act as arbitrary, nontariff barriers that protect the Canadian industry on their home turf.

This is not a new issue. As the administration has noted, in the Tokyo Round of Multilateral Trade Negotiations, the United States and Canada agreed to reduce plywood tariffs once the standards issue was resolved. But when those efforts failed, the two countries agreed to maintain the current tariff levels. Since that time, it has been the position of the United States Government and U.S. industry that plywood tariffs should only be reduced if all nontariff barriers are eliminated. Unfortunately, that position was changed in the FTA.

Pursuant to the FTA, the Canadian Mortgage Housing Corporation, better known as the CMHC, which is roughly the equivalent of our Federal Housing Administration, or the FHA, must review the qualifications of U.S.-produced CDX plywood for use in CMHC housing. This approximates, as has been noted, 10 percent of Canada's construction market.

Now, if the CMHC permits the use of CDX plywood, tariffs on all structural panels are to be eliminated over 10 years. If CMHC does not permit the use of CDX plywood, and that decision is not affirmed by an expert panel, then the United States may delay tariff cuts on structural panels. In other words, if Canada grants access to less than 10 percent of its construction market, we must give the Canadians 100-percent access to our market, which incidentally is 10 times the size of the Canadian market.

How did this happen? Well, during the FTA negotiations, Canada argued that its nontariff barriers were promulgated by a private organization, the Canadian Standards Association, and were outside of its control. On the contrary, the real impediment to the use of U.S. plywood in Canada is Canada's national building code, which is published by the Canadian National Research Council, and that is a Federal Government organization. The national building code has incorporated the private, discriminatory standards developed by the Canadian Standards Association, and there is nothing to prevent the Government of Canada from accepting U.S. performance standards on an equal basis.

This situation, a protected Canadian home market and a completely open U.S. market, could be disastrous for the U.S. plywood industry. Perhaps I should explain what market we're talking about here. The residential and nonresidential construction markets account for about two-thirds of plywood consumption. Uses include roof sheathing, wall sheathing, subflooring, shear walls, and other structural applications.

In addition to construction plywood, the structural panel industry produces waferboard, oriented strand board, and structural particleboard, all of which can be used for many of the same applications. Plywood is used also for nonconstruction purposes, such as for crating and furniture. The industry must continue to expand all these markets internationally to assure the health of our industry. If our plywood could gain access to Canada, it could compete with Canadian plywood and waferboard and hopefully increase the demand for U.S. softwood plywood. However, under the FTA, there would be limited opportunity for U.S. producers to develop Canadian markets. At the same time, our industry would face an influx of similar Canadian products into our domestic markets.

Just to give you some order of magnitude, the U.S. softwood plywood market is $4.6 billion, and the Canadian softwood plywood market currently is $710 million. The charter over here to my left may help to illustrate the difference. Even if the CMHC approves the U.S. CDX for use in Canadian Government-financed housing, which we hope they do, CMHC housing accounts for only about $50 million in plywood consumption.

As a result of all this, the U.S. industry will be severely injured. An available U.S. market would likely encourage an increase in Canadian production not justified by market forces. This would dramatically increase shipments to the United States and would artificially depress prices.

Now, even if there is no Canadian capacity expansion, and only the 300 million square feet of current excess Canadian plywood capacity were shipped to the United States, the U.S. industry will lose more than $125 million in revenues.

In a U.S. housing recession year, the situation could become desperate if the Canadian industry increased its capacity and/or dumped into the U.S. market. Not only will this seriously injure U.S. plywood producers, but in the long run this inequitable situation will tend to move jobs north of the border. U.S. mills will be forced to close down and, just as importantly, companies deciding where to invest in plywood plant modernization and expansion will be more likely to invest in Canada, where they've got access to both markets.

In contrast, U.S. producers will be denied the promise of the free trade agreement, and that is a chance to compete on an equal basis in Canada. If U.S. firms have access to the Canadian market, it will help relieve supply pressure in the United States, and it will discourage Canadian companies from overproducing and dumping into our market.

In short, under the FTA, trade in plywood will be totally unfair unless the U.S. industry has equal access to Canadian markets. That's all we're asking for, gentlemen, is equal access to the Canadian markets. We're not asking for protection of our industry; we just want equal access to the Canadian markets if the tariffs are coming off. In other words, free trade that is truly fair trade in both directions, not just in one direction.

Now, this problem can be solved if the administration or Congress insists that the Canadian market be open to U.S. plywood before the tariffs are removed. As noted earlier, this had been the position of the U.S. Government during and since the Tokyo Round, and it should be the position today.

Our Government should negotiate with Canada to eliminate the nontariff barriers before eliminating the plywood tariffs. Now, if those negotiations fail, or if they're not now possible, then action must be taken that would ensure a solution.

Legislation implementing the FTA provides an opportunity to address this problem. If it is not resolved before the legislation is presented to Congress, then a solution should be mandated in that legislation.

The American Plywood Association currently supports a proposal that would effectively require resolution of the plywood standards problem within a fixed period after implementation of the FTA—and 3 years is not unreasonable. If the matter is not resolved, then the tariffs on structural panels should be returned to their 1988 levels.

In conclusion, the current situation is fundamentally unfair. It will injure the United States, unfairly limit exports, and will increase imports. It will injure U.S. plywood companies, and it will ultimately cost U.S. plywood jobs. The situation must be changed because it's the stuff that trade deficits are made of.

It is now possible to prevent this problem that could cost plywood manufacturers hundreds of millions of dollars a year in 5 to 10 years, a problem that will be substantially more difficult to solve then. I certainly hope, with your assistance, that this legislation will be forcefully addressed as it comes before Congress.

Thank you, sir.

[Mr. Robison's statement may be found in the appendix.]

Chairman WYDEN. Thank you very much, Mr. Robison. We will have some questions in just a minute.

Mr. Galloway, president of Hood Industries, Hattiesburg, MS.

TESTIMONY OF JOHN N. GALLOWAY, PRESIDENT, HOOD INDUSTRIES, INC.

Mr. GALLOWAY. Chairman Wyden and members of the committee, we certainly appreciate the opportunity to come here this morning to speak with you.

I am John Galloway, president of Hood Industries. We are an independently owned company which operates two southern pine plywood plants at Beaumont and at Wiggins in the State of Mississippi. I am also a trustee of the American Plywood Association. I would like to briefly describe the history of our operations before we get into the discussion of the free trade agreement.

During the 1970's, the Beaumont and Wiggins plants were operated by two large wood products companies. In the early 1980's, both of these plants were shut down for economic reasons, causing hardships on the workers as well as the surrounding communities.

Our small company began with the acquisition of the Beaumont plant, which we reopened in March 1983, and then the Wiggins plant, which we reopened in May 1984. My point is that our 415 plywood workers at these two plants have already survived hard times in the past and are making a vital contribution to the economy of Mississippi. They appreciate the stability that they have enjoyed for the past several years.

The combined payroll of our two plywood operations was nearly $7 million in 1987, and most of that money was put into use in the local economy. They also spent about $3 million in supplies and repair parts, and well over 90 percent of that business was also local. These two plants, in 1987, also consumed over $20 million in timber, which unlike our larger competitors, we rely on 150 small, independently owned timber companies to supply our timber to us. We are also planning capital expenditures of nearly $2 million at these two facilities in 1988.

Our essentially rural plywood industry in Mississippi and across the South has expanded from a handful of plants in the early 1960's to the point in 1987 where it produced 51 percent of the structural panels made in the United States.

As I have indicated in the case of Hood Industries, our plywood industry has played a basic role, we think, in strengthening the economies of small communities throughout the South. I am here today because I believe that, as currently drafted, the plywood provisions of the free trade agreement with Canada pose a serious threat to the stability of our industry and have the potential to wipe out many of the gains that have already been made.

The production of our company comes entirely from southern pine timber, as has been mentioned today, and is also 100 percent CDX sheathing grade. So, we have a major stake in what we're discussing today.

There are two main issues in the free trade agreement that concern us. Number one, the agreement, as drafted, does not address the discriminatory Canadian standards that would bar any panel made from a tree not grown in Canada. This would include all southern pine production, and amounts to naked protectionism at a level that leaves the Japanese far behind.

Number two, as producers of high-quality southern pine CDX sheathing, we are even more concerned about Canada's exclusion of panels containing D-grade veneer. As others have stressed, that restriction is not founded on panel performance but is yet another of the many barriers set up for the purpose of protecting the Canadian plywood industry from competition.

Southern pine CDX plywood is recognized across the United States and just about everywhere in the world, except Canada, as a reliable and economical structural panel for a wide range of construction applications. It should be permitted freedom of access to the Canadian market for all of the uses for which it is intended.

Should the current provisions of the free trade agreement not be amended, Canadian plywood producers would have a one-way ticket to our large U.S. plywood markets that we and others have worked hard to create, while we would be barred from their market. Ultimately, it will cost us jobs. Hood Industries ships a significant amount of its sheathing production to States along or close to the eastern seaboard of the United States, to areas that would be readily accessible to waterborne shipments from Canada. That concerns us greatly.

With duty-free access to markets such as these, the Canadian industry could claim a growing share of our domestic markets. Even though we have a product which we believe many Canadian consumers would like, we would be powerless to respond. A new recession in domestic plywood manufacturing and renewed hard times for our plants and employees in rural Mississippi could result—a situation that can be avoided if the problem is remedied in the enabling legislation. This, gentlemen, is what we ask you to do. The legislation should make it clear that before the tariffs on plywood are completely eliminated, the standards issues must be resolved.

My final point concerns export market development. The international marketplace is of increasing importance to producers of structural panels throughout North America. I share the view that Canadian standards, as now written, are slowing the growth of the total global market for structural panels because of these unnecessary restrictions on grade and the confusion that they create.

If we can resolve our differences with our Canadian colleagues and develop a common set of standards, fairly based on product performance and designated end uses, I truly believe the industries of our two countries would each enjoy a more prosperous future.

In closing, I would like to say again that we are not afraid of free trade with Canada at all. All we ask is that this free trade be fair.

Thank you.

[Mr. Galloway's statement may be found in the appendix.]

Chairman WYDEN. Thank you. We will have some time for questions in just a few minutes.

Our next speaker is Mr. Bruce Stevenson, president of Bingen Plywood Co. of Washington State.

TESTIMONY OF BRUCE R. STEVENSON, PRESIDENT, BINGEN PLYWOOD CO.

Mr. STEVENSON. Chairman Wyden and members of the committee, I am Bruce Stevenson, president of Bingen Plywood Co., a small independent operation in the eastern foothills of the Columbia Gorge region in Washington State. For the past 42 years, our company has provided high-quality plywood products to construction and industrial markets throughout the United States and overseas.

Our family-owned company is the major employer in the Columbia River Gorge, an economically depressed rural area of the Pacific Northwest. Counting lumber operations, we provide direct employment to more than 450 persons drawn from small communities on both sides of the Columbia River. The number employed in our plywood manufacturing at Bingen is approximately 120.

On the Washington side we have employees from Bingen, White Salmon, Lyle, Trout Lake, Underwood, and Goldendale. Others of our workforce cross the Columbia daily from Hood River, Cascade Locks, Parkdale, and other communities in Oregon. Because of what is termed the multiplier effect, our plywood and lumber operations support about 1,300 other jobs in the two States.

Approximately 75 percent of our production is CDX sheathing grade plywood, bearing the trademark of the American Plywood Association. During 1987, we produced 100 million square feet of plywood, 3/8-inch basis. This quantity may seem small when compared to the total 1987 U.S. production of 23.3 billion square feet. However, it is large in terms of our company's importance to the communities we represent. The same can be said of all the independent producers in our geographically diversified national plywood industry.

I wish to emphasize to the committee today that our small company is not afraid of competition, from any quarter. We are told that the quality of our plywood products, including CDX sheathing, is equaled by few other plants. The recovery of saleable products from the raw log is competitive with any plant of which I'm aware, domestic or foreign.

Furthermore, according to industry consultants and knowledgeable equipment vendors, including Canadian vendors, and other informed sources, our productivity per man hour for the production of green veneer is unmatched in the United States or Canada. And green veneer amounts to half of the entire process of producing finished plywood.

During the last 2 years, and over the next 2 years, we will spend well over $15 million on plant improvements. We are prepared to meet Canadian and global competition. However, our commitment to our employees and to future investments is severely restrained by our fear of overriding economic factors over which we seem to have little control.

The absolutely unnecessary removal of important timber resources from harvestable Federal, State, and private lands, to satiate extreme environmental positions, is clearly the greatest threat to our survival. But I am not here to fight that battle today.

Our fight today is to prevent our primary domestic markets from being inundated with Canadian plywood as a result of the free trade agreement, while Canada's nontariff barriers to D-grade veneer would deny us any access to Canadian markets.

We have gone over what Canada is doing about prescriptive standards and how they're keeping us out. If Canada would adopt standards based solely on the strength and durability of plywood, we could compete in Canada. We are not afraid of competition, but competition between Canada and the United States should be free and open in both directions.

The sheathing markets that Bingen and others have worked hard to develop in the western United States are within easy shipping range of Canadian plywood sheathing producers. With a protected home market and an open border eventually freed from tariffs, Canadian mills would have strong incentives to increase production and dump their product in the United States. This could have a serious negative impact on the competitive position of U.S. plywood producers, especially those located in the West.

The crux of our position is that if the United States opens its plywood market to Canada, Canada should open its markets to the United States. This was the promise of the free trade agreement.

Bingen Plywood Co. has been able to compete and remain independent in spite of the dynamic growth of much larger companies and their penchant for acquiring well-managed operations such as ours. We have always accepted the challenge of our free enterprise U.S. economy. Now we are confronting a situation in the name of so-called free trade with Canada which flies in the face of free enterprise by proposing to hand nearly all the advantages to one side.

The ironic thing about this situation is that in a free trade agreement the only excusable justification for imposing barriers to trade, as I interpret it, is for reasons of national defense or to protect an infant industry. The Canadians certainly have one of the best developed plywood industries in the world. The industry is strongly supported by the Government through a quasi-governmental/private technical group, and most importantly, by a timber management program that virtually allows stumpage prices to vary according to market conditions.

The current provisions of the plywood section of the free trade agreement clearly need amendment to ensure equal access by U.S. producers to the Canadian market. As Congressman Don Bonker of Washington said nearly 3 years ago regarding free trade with the Canadians, our industry doesn't have to be the punching bag on this trade issue.

Thank you, Congressman Wyden, and members of the committee, for the opportunity to bring these views to you today.

[Mr. Stevenson's statement may be found in the appendix.]

Chairman **Wyden**. Thank you.

Mr. Flint, I gather that you would be willing to answer some questions for us with respect to the technical standards issue? Would that be acceptable?

Mr. **Flint**. Yes, Mr. Chairman.

[Mr. Flint's statement may be found in the appendix.]

Chairman **Wyden**. Mr. Robison, let me begin with you. One thing that did please me was your statement that the American Plywood Association didn't seek to kill the U.S.-Canadian Free Trade Agreement. That's a view that I very much appreciate because, to me, the question is not whether or not it's a good agreement; it is a good agreement. The question is whether or not we can make a better one and particularly build in some additional procedural guarantees to ensure that, over time, we're going to see something done about the performance standards issue.

I gather from your testimony that the idea that I really threw out to Mr. Holmer, the idea that after 3 years there would be an effort by the Department of Commerce and the Trade Representative's Office to really verify whether the Canadians have acted in good faith in terms of meeting a performance-based system, is that something that you think would give you all some additional leverage and opportunity to get a fair shake?

Mr. ROBISON. Yes, sir. We certainly support that. I guess my concern is that the administration seems to stop short of putting any teeth in that. I would hope that as the implementing legislation is developed some way could be found to put some teeth into it, that if they're not conforming, then something is going to happen to them.

Chairman WYDEN. I can assure you that we're going to do everything we can in this implementing language to try to lock in some procedural guarantees, so that we will be able to get a fair shake for the industry. I think that kind of provision would be consistent with the spirit and the intent of the treaty and something we'll want to have your input and your advice on as we go to try to draft some implementing language.

Now, one of the things that I think would be helpful for the record is that you all are concerned that as the agreement now stands, Canada might decide to dump plywood products here, and should they do that, of course, there would be a domino effect, a very negative set of economic forces at work, with serious pricing effects, mill closures, and the loss of jobs.

Could you elaborate on such a scenario and how you see something like that under the agreement as it stands now?

Mr. ROBISON. I think such a condition as that would be most likely in a period of a depression in housing in this country, or a drop in demand on our part in the USA, because this then would become their major market. They export quite a bit of their product now, and this would become the export market of preference.

I think, if the thing stands as it's now written, I think you would see an expansion in Canadian productive capacity. I think you would have a good bit of expansion there, either in the mills that are presently in place, or the construction of new mills, or the opening of mills which have been closed in the past. So, you would have a tremendous new capacity developed there, and then this would become the market in which they would dump.

Chairman WYDEN. This kind of dumping scenario has unfolded in other sectors and other products, isn't that correct?

Mr. ROBISON. That's true. I think we found that to be true in the lumber situation.

Chairman WYDEN. How did it take place with respect to lumber?

Mr. ROBISON. Well, essentially in the same way that I'm describing as a possibility that it could happen for plywood down the road. We went through a period of low demand here in housing and other markets, and the lumber from Canada then became a serious negative factor in our market.

Chairman WYDEN. What do you see under such a dumping scenario with respect to lost plywood revenues and lost plywood jobs? What would we be talking about?

Mr. ROBISON. Well, in my prepared remarks I mentioned $125 million if they just impacted us with their present excess capacity. I think in a situation such as your scenario, it could go $500 million or—May I call on my statistical expert here, who is not at the table, to verify or dispute that?

Chairman WYDEN. Sure.

Mr. ROBISON. This is Mr. Anderson, our director of market research and economic service.

Chairman WYDEN. Mr. Anderson, we welcome you. Would you like to elaborate on what you see as the potential losses?

Let us note that Mr. Anderson represents the American Plywood Association as well.

Mr. ANDERSON. Thank you, Chairman Wyden. It's nice to see you again.

I think that in looking at the plywood industry in this country, you must realize that we are a commodity-type business. We're subject to the law of supply and demand. That's the main law that we have to function with.

What we are dealing with in a low-market situation is a condition in which all of the supply is impacted. The price is the first thing that drops. Obviously, you get to a point where the less efficient producer is finally forced out of the market.

This kind of a situation did occur during late 1979 and through 1983, as far as the plywood industry is concerned. It was during that time that we lost—I believe you mentioned you went from 90 to 55 operating units in the State of Oregon. Now, that is a substantial decline. Obviously, some of those people did get back into work as the market recovered, and this is another kind of thing that does happen in a commodity-type business.

I would make a judgment that if we are in a strong market, and we add 300 million feet of capacity, which does not have any other place to go, we would lose in the neighborhood of two to three plywood operations. That would be the kind of thing.

Now, where that kind of pressure is in place because of the market decline, you're already going to lose the two to three mills. Then you get to the point where additional mills are lost because you have a competitive situation which is not influenced by the same cost factors. It can come into your market and create further disruption, so you might as much as double the situation that you have in this lower market scenario.

I don't know if that answers the question, but——

Chairman WYDEN. That's helpful.

I'll have a couple of final questions in a moment, but I want to recognize my colleague, Mr. DeFazio.

Mr. DEFAZIO. I would like to thank the gentlemen for their excellent testimony. I regret that Mr. Holmer couldn't stay because it doesn't seem that we do have the wholehearted support of the industry behind the provisions that have been tentatively negotiated here. I want to thank you for your testimony and just really remark on the contrast between the reality of the situation as you see it and the rosy view that was presented before. I'm afraid that has characterized all of the trade negotiations of this administration and even past administrations, whether they be Democrat or Republican. The United States has not done well, and we can do better. I really appreciate your factually putting the line to it and, I'm going to persist, because I'm not going to see a bunch of mills closing down in my district because of more unfair competition.

The situation we have now is bad enough. It's bad enough that the Japanese won't let our plywood in there because of cosmetic things and so on. You can't produce it in our size, or the cosmetics again are a problem. The structural problem is not there and these other things are just "red herrings." We'll just keep at it, and I'll do my best to support your efforts. I really don't have any questions.

Mr. ROBISON. May I say, Mr. Chairman, we appreciate that support.

Chairman WYDEN. Let me ask a few other questions in the same vein of persistence and continuing the cause until there is a fair shake for plywood.

Mr. Flint, your group has been doing technical research on plywood durability and setting standards for something like 50 years; isn't that correct?

Mr. FLINT. That's right.

Chairman WYDEN. Those standards which you set for various grades of plywood, standards which are directly related to the product's performance under different circumstances, including climate, those are the standards used in countries all over the world; isn't that correct?

Mr. FLINT. The standards are recognized in all of the trading countries with the exception of Canada.

Chairman WYDEN. How many countries, worldwide, accept those standards?

Mr. FLINT. Every country that we have worked with in the export activities, without exception, except for Canada.

Chairman WYDEN. Britain accepts them, Denmark accepts them, Japan accepts them, West Germany accepts them, Sweden accepts them, France accepts them, Holland accepts them, Italy and Belgium all accept them; isn't that correct?

Mr. FLINT. That's right.

Chairman WYDEN. Now, that's a pretty long list. Does Canada accept these standards?

Mr. FLINT. No; we have the nontariff barriers to deal with.

Chairman WYDEN. Why is that?

Mr. FLINT. Well, it's because they have provisions in their codes, in their regulatory system, that say that it is OK in Canada as long as they conform to Canadian standards.

Chairman WYDEN. Isn't it correct that as recently as August 1987, the federally chartered Standards Council of Canada refused to accredit the internationally recognized APA trademark on grounds that the association is not Canadian?

Mr. FLINT. That's true.

Chairman WYDEN. So, if they don't accept our standards, how do we get our plywood products approved for Canadian use?

Mr. FLINT. Well, we have a couple of options. We can produce plywood that conforms to Canadian standards and identified as Canadian standards, or we can encourage the development of performance standards in Canada, which they are working on now. But it's the prescriptive standards that are embodied in their product standard, as well as what they have in their emerging performance standards, that keep us out. There's no way we can get in there.

Chairman WYDEN. Under the usual rules and procedures in this country, would a Canadian organization like our APA have similar problems getting accreditation in the United States?

Mr. FLINT. No.

Chairman WYDEN. In fact, Mr. Flint, doesn't the APA have a Canadian subsidiary, American Plywood, Ltd., which helps Canadian producers get their products into U.S. markets, including helping them get through the APA standards and testing process?

Mr. FLINT. That organization was set up, oh, probably 20 or 25 years ago as a means by which a member producing in the United States might import blanks from Canada for further processing and sale in the United States. But the reason that was set up was to provide a quality assurance and check on products that eventually carry our trademark, so it's not the vehicle for entry into the United States that it is represented to be.

Chairman WYDEN. Could you compare CDX grade plywood, which is not approved for use in Canada, with the Canadian plywood product that is normally used in Canadian building?

Mr. FLINT. They are basically the same. The defect size, the knotholes, are slightly larger in D-grade veneer than they are in C. But from a performance standpoint, they both will answer all the requirements of the code or construction requirement.

Chairman WYDEN. Mr. Flint, my staff has spoken extensively with representatives of the Canadian plywood industry over the last few weeks, including an interview with Art Kempthorn, your opposite number for technical review for the Council of Forest Industries of British Columbia. One of the things that Mr. Kempthorn had to say was that their industry was working hard to develop performance-based standards for building materials like plywood. Now, presumably this could open the door to our CDX product.

But it is my understanding that, unlike our system of setting standards, the Canadians only recently have allowed one of the APA's experts, an American, to set in on this project. It is also my understanding that the U.S. industry representative doesn't get a vote on decisions made by this technical group.

Do you view this as a fair process for U.S. industry, in terms of the vital process for setting standards?

Mr. FLINT. I think it's an open process. We have worked with them during this period to provide them with guidance on the progress that we've made in the development of performance standards, and I think it is healthy that they look to us and ask our support, our counsel.

Chairman WYDEN. What about this question of full voting membership and the technical review process?

Mr. FLINT. We don't believe in entering into the standards decisions that are made in Canada. We think that their industry ought to be able to design standards to satisfy the needs of their industry, and we don't think we should have a vote in that. But what we do want is equal access from the standards and the process that we go through in our country. In other words, we recognize what they do; they recognize what we do.

Chairman **Wyden**. That certainly seems like a logical way to do it. Maybe it's too logical and that's the problem with it.

I don't have any further questions for our panel. You all have been excellent. I see my colleagues have departed, as has minority counsel.

Do any of you gentlemen want to add anything for the record?

Mr. **Stevenson**. I would just like to say one thing. You're touching on the subject of dumping. Like in the lumber business, they reason they could dump is because their stumpage prices could vary. I think that is something that is part and parcel of this whole question of why can they affect our industry so much when there is a recession in our country. Why is it they can adjust to that and be so effective in coming down to our country? I think that's an issue that's always got to be in the back of your mind.

Chairman **Wyden**. Well, we look forward to working with you gentlemen, and we look forward to working with you to strengthen this agreement, to get it passed, and to get it passed so that we can have the benefits of free and fair trade. I thank you for your patience and willingness to work with the subcommittee.

The subcommittee is adjourned.

[Whereupon, at 12:12 p.m., the subcommittee was adjourned, subject to the call of the Chair.]

APPENDIX

Testimony of Congressman Robert F. Smith before the
House Committee on Small Business
(Subcommittee on Regulation and Business Opportunities)
March 8, 1988.

MR. CHAIRMAN, THE PACIFIC NORTHWEST AND CANADA HAVE ENJOYED A PROSPEROUS RELATIONSHIP, BASED LARGELY ON A COMMON BORDER, COMMON LANGUAGE, NATURAL RESOURCES AND CLIMATE, CULTURAL SIMULARITIES, AND OCEAN ACCESS TO THE PACIFIC RIM.

THE VOLUME IN TRADE BETWEEN THE UNITED STATES AND CANADA IS THE GREATEST IN THE WORLD. CANADA BUYS TWICE AS MUCH IN GOODS FROM THE U.S. AS JAPAN DOES AND MORE THAN MEXICO, WEST GERMANY AND THE UNITED KINGDOM COMBINED. BILATERAL AGRICULTRAL TRADE ACCOUNTS FOR THREE PERCENT, OR ABOUT $3.5 BILLION.

OUR TRADE RELATIONSHIP WITH CANADA ALREADY SERVES AS AN EXPAMLE TO OUR OTHER TRADING PARTNERS. ABOUT 80 PERCENT OF THE GOODS AND SERVICES BETWEEN US TRAVELS TARIFF FREE. HOWEVER, SOME EXPERTS PREDICT APPROVAL OF THE U.S.-CANADIAN TREE TRADE AGREEMENT COULD INCREASE THIS TRADE BY 50 TO 100 PERCENT.

THIS AGREEMENT CAN BE GOOD FOR ALL OF US: FOR OREGON, FOR AMERICA, FOR CANADA. IT CAN CREATE JOBS AND INCREASE THE INDUSTRIAL COMPETITIVENES AND ECONOMIC STRENGTH OF BOTH COUNTRIES.

NOT ALL INTERESTED PARTIES SHARE MY ENTHUSIASUM FOR THIS AGREEMENT. THE WHEAT PRODUCERS HAVE EXPRESSED CONCERNS ABOUT ELEMENTS OF THIS TRADING RELATIONSHIP THAT ADVERSELY AFFECT THEM, SUCH AS TRANSPORTATION SUBSIDIES.

PLYWOOD PRODUCERS ARE NOT ENTIRELY SATISFIED WITH PROVISIONS IN THE AGREEMENT WHEREBY CANADA WOULD REVIEW ITS NON-TARIFF BARRIERS FOR PLYWOOD. THESE PRODUCERS ASSERT THAT ONLY 10 PERCENT OF THE CANDIAN MARKET COULD BE OPENED.

THE U.S./CANADA FREE TRADE AGREEMENT WILL ELIMINATE HIGH TARIFFS ON PLYWOOD IF CANADA IS WILLING TO ALLOW U.S. PLYWOOD TO BE USED IN HOUSING FINANCED BY ITS EQUIVALENT OF THE FHA, LESS THAN 10 PERCENT OF THE CANADIAN CONSTRUCTION MARKET. EVEN WITH THIS TARIFF ELIMINATION, HOWEVER, RESTRICTIVE CANADIAN STANDARDS WILL STILL PREVENT THE USE OF U.S. PLYWOOD IN 90 PERCENT OF THE CANADIAN CONSTRUCTION MARKET.

WHILE CANADA FREELY USES U.S. PLYWOOD WHEN ITS INDUSTRY IS ON STRIKE, AT ALL OTHER TIMES IT PROTECTS ITS DOMESTIC MARKET WITH NONTARIFF BARRIERS. OUR GOAL MUST BE THE ACCEPTANCE BY CANADA OF PERFORMANCE-BASED STRUCTURAL PANEL STANDARDS IN ITS BUILDING CODES THAT DO NOT DISCRIMINATE AGAINST U.S. PLYWOOD.

BOTH GOVERNMENTS MUST BE INFORMED ABOUT THE INEQUITY PERPETRATED BY THE FTA. WE SHOULD SEEK TO NEGOTIATE WITH CANADA THE ELIMINATION OF THE NONTARIFF BARRIERS.

IF THESE NEGOTIATIONS FAIL, WE SHOULD THEN SEEK ALTERNATIVE MEANS TO ELIMINATE CANADA'S UNFAIR RESTRICTIONS ON U.S. PLYWOOD. THE LEGISLATION IMPLEMENTING THE FTA PROVIDES AN OPPORTUNITY FOR CONGRESS TO ENSURE THAT ACTION IS TAKEN.

I BELIEVE WE MUST INVESTIGATE THESE CONCERNS AND EVALUATE POTENTIAL SOLUTIONS. WE MUST DO ALL WE CAN TO MAKE THIS AGREEMENT A SUCCESS. FOR THIS REASON, I HAVE CONTACTED THE U.S. TRADE REPRESENTATIVE AND THE INTERNATIONAL TRADE ADMINISTRATION TO ENCOURAGE THE INCLUSION OF APPROPRIATE LANGUAGE IN THE IMPLEMENTING LEGISLATION.

RATIFICATION OF THIS AGREEMENT IS NOT ONLY IMPORTANT TO THE UNITED STATES AND CANADA, BUT TO THE WHOLE WORLD.

THE ECONOMIC BENEFITS FOR CANADA AND THE U.S. ARE OBVIOUS. BUT IN A BROADER SENSE, THIS AGREEMENT IS SIGNIFICANT BECAUSE IT WILL SEND A MESSAGE TO OTHER COUNTRIES THAT FREE TRADE IS A WORHTY GOAL.

IT SHOULD SERVE AS A MODEL FOR THE 92-MEMBER GENERAL AGREEMENT ON TARIFFS AND TRADE, THE INTERNATIONAL COVENANT THAT GUIDES WORLD TRADE. SEVERAL NATIONS, INCLUDING JAPAN AND SOUTH KOREA, ALREADY HAVE EXPRESSED INTEREST IN ENTERING INTO FREE TRADE ARRANGEMENTS WITH THE U.S. BASED ON WHAT THEY'VE SEEN FROM THE CANADIAN PACKAGE.

THIS AGREEMENT REPRESENTS A WINDOW OF ECONOMIC OPPORTUNITY THAT RARELY COMES ALONG. WE CAN USE THIS ACCOMPLISHMENT TO ACHIEVE THE SHARED GOAL OF ELIMINATING ALL TRADE-DISTORTING BARRIERS AND SUBSIDIES THAT HINDER TRADE WORLD-WIDE.

THIS THEME HAS BEEN CENTRAL TO MY OWN STRATEGY FOR THE IMPROVEMENT OF U.S. AGRICULTURAL TRADE AND APPLIES EQUALLY WELL TO ALL TRADE.

IT'S A BOLD STEP TOWARD A BARRIER-FREE INTERNATIONAL TRADE ATMOSPHERE. I BELIEVE IT'S COOPERATIVE LEADERSHIP AT ITS BEST, AND I URGE THAT WE GIVE IT A FAIR HEARING AND BROAD SUPPORT.

Statement of the Honorable Trent Lott
to the Chairman of the House
Small Business Subcommittee on
Regulation and Business Opportunities

Mr. Chairman, it is my understanding that you will be holding a hearing to examine the effects of the U. S.-Canada free trade agreement on the plywood industry in the U. S. Although I am not able to attend the meeting personally, I wanted to commend your efforts to look into this potential problem.

While I certainly am not opposed to the agreement, I am concerned that the plywood industry may be substantially impacted. As you know, that industry in the South, in particular, is relatively new and not so stable as in the rest of the country. With this in mind, Mr. Chairman, I am respectfully requesting that you give full consideration to the testimony heard before your subcommittee.

STATEMENT BY CONGRESSMAN BERYL ANTHONY, JR.
BEFORE
THE SUBCOMMITTEE ON REGULATION & BUSINESS OPPORTUNITIES
March 8, 1988

MR. CHAIRMAN: Thank you for giving me the opportunity to be here, today, to express my strong concern over the terms of the current Canada Free Trade Agreement, which would enable Canada to retain non-tariff barriers against imports of U.S. softwood plywood.

Not only is timber vitally important to the economy of Arkansas, but the southern plywood production in Arkansas contributes greatly to the national production of plywood. In fact, it was in Fordyce, Arkansas, in 1964, that Georgia-Pacific Corporation constructed the first southern pine plywood mill. Today, there are eight southern pine plywood plants in Arkansas. In 1986, these plants produced 1.5 billion square feet of plywood, which ranked Arkansas 5th among the 24 plywood producing states.

The rapid development of southern pine plywood manufacturing in Arkansas and other states reached the point in 1987, where southern pine plywood accounted for 51% of the record 23.4 billion square feet of plywood made in the U.S.

The plywood industry in Arkansas directly employs approximately 2,500 persons, and accounts for the employment of an additional 2,500 persons in the support operations field (ie. logging, transportation). This industry generates earnings of $738 million for the people of Arkansas. In Huttig, alone, with population of 960, Manville Forest Products Corporation employs 340 people, with an annual payroll of $10.65 million, and produces over 100 million square feet annually.

As you can determine by these statistics, the economic contribution of the plywood industry in these rural areas is indispensable. While there are currently 393 active saw mills in Arkansas, with 190 active secondary mills, 163 mills have already closed down. I am obviously concerned about the impact on Arkansas of opening U.S. borders to Canadian timber imports. This can hardly be considered equitable while Canada retains their restrictions on U.S. timber into their market.

In the past three years, I have fought hard on behalf of the timber industry to stop the flow of subsidized Canadian timber into the U.S., which was undercutting our domestic production. After months of negotiations and Administration haggles, we were finally able to conclude an acceptable settlement with the Canadian government early last year. While this agreement is protected under the FTA, I do not intend to sit by and watch yet another misguided policy being implemented by the Canadian government against the U.S. timber industry.

Clearly, eliminating all U.S. tariffs on Canadian timber, while allowing them to retain measures preventing the importation of U.S. softwood plywood into 90% of their industry, undermines the objectives sought under the FTA. Existing tariff barriers are negligible against these restrictions. The goal our two countries should strive for is the free flow of goods, including timber, between the U.S. and Canada. The Canadian Building Codes, in short, do nothing more than ensure that this flow is in one direction only -- into the U.S.

Advocates of the present FTA timber provision assert that this provision is a positive first step, a "foot in the door," to the eventual elimination of all arbitrary barriers to U.S. plywood. Yet they do not dare determine how soon this is to transpire -- in a couple years? a decade? longer? Furthermore, I'd like to ask them where the incentive to "rewrite" Canadian building codes will come from, once all U.S. tariffs on Canadian lumber into the U.S. are removed? Will the U.S. plywood industry be able to survive the onslaught of Canadian timber during this time? Will a viable industry even exist to benefit from this final elimination of arbitrary Canadian standards?

According to the plywood industry estimates, U.S. timber industry loses $200 - $300 million annually in potential market revenue, due to Canadian plywood standards. One can only imagine the magnitude of the impact on the U.S. plywood industry if Canadian timber is free to flow across our borders, without first ensuring that we, too, have greater access to their markets?

Mr. Chairman, I believe it is imperative that we consider this issue with extreme care before we decide whether or not to approve the Administration's agreement with Canada, to the dire detriment of a vital American industry.

TESTIMONY OF
AMBASSADOR ALAN F. HOLMER
BEFORE THE
SUBCOMMITTEE ON REGULATION AND BUSINESS OPPORTUNITIES
OF THE
COMMITTEE ON SMALL BUSINESS
MARCH 8, 1988

Thank you for the opportunity to testify before you today on the U.S.-Canada Free Trade Agreement.

The formal signing of the Free Trade Agreement on January 2 by President Reagan and Prime Minister Mulroney culminated almost two years of complex and sometimes difficult negotiations. It is no exaggeration to say that this is a truly historic document. This Agreement will substantially increase trade and investment opportunities in both the U.S. and Canada. As President Reagan said, "This historic Agreement will strengthen both our economies and over time create thousands of jobs in both countries."

Trade between the United States and Canada too often is taken for granted. Our trade problems with Japan and the European Community are so much in the spotlight that most Americans still don't realize Canada is our biggest trading partner. Yet over $130 billion in goods cross our common border annually. With $60 billion in U.S. exports to Canada in 1987, Canada is also our largest and fastest growing export market.

These negotiations were characterized by hard bargaining and difficult compromises. Many will seek to identify winners and losers, but that approach is too narrow. This is a win-win Agreement. It should result in increased economic activity, higher trade levels, more jobs, and enhanced competitiveness for both the United States and Canada. The people of both countries will benefit from this Agreement, through lower prices and greater consumer choice.

The U.S.-Canada Free Trade Agreement is the most comprehensive bilateral trade agreement ever negotiated. As the world's largest trading partners we are constructing the world's largest shared market. We have submitted to the Subcommittee today an extensive summary of the Agreement. Let me just take a moment to highlight its main provisions:

- We have eliminated all tariffs between the United States and Canada.

- For the first time since services became a major international commercial issue, two major trading partners have negotiated an agreement establishing rules for bilateral trade in services.

- We are establishing much freer and more secure trade in energy.

- Also for the first time, the United States and Canada have agreed to rules governing bilateral investment activities.

There are also provisions covering automotive trade, agriculture, alcoholic beverages, customs matters, dispute settlement, government procurement, product standards, personnel movement, and many other areas. These are all described in detail in the summary we submitted to the Subcommittee today.

Today, however, I would like to focus on how the FTA affects the forestry sector. As I see it, there are three principal ways in which the FTA will have direct effects on the U.S. forestry sector -- tariffs, product standards, and the softwood lumber subsidy case.

With respect to tariffs, we believe that industries in the forestry sector came out well. All forestry tariffs will be eliminated within 10 years under the Agreement. However, according to the wishes of our domestic industries, some of these will come down faster, some more slowly.

In the case of wood products, of course, many products are already duty-free -- logs, much of the lumber imported into both

Canada and the United States, and pulp bear no tariffs now. For fiberboard, tariff cuts will be staged over five and, in some cases, ten years.

In the last days of the negotiations, we managed to convince the Canadians to accept five-year, rather than ten-year, staging for many paper items and furniture -- an extremely high priority for these industries.

Finally, for plywood and particleboard only, we linked U.S. tariff cuts to reducing Canadian nontariff barriers. U.S. tariff cuts are contingent on either the acceptance of U.S. plywood products by the Canadian government-controlled mortgage authority, the Canada Mortgage and Housing Corporation (CMHC), or a fair and impartial review of its decision if negative. CMHC will decide by March 15 whether they perform acceptably. A positive CMHC decision will open the door -- not all the way, but a substantial amount -- to sale of U.S. products in Canada. A negative CMHC decision will be reviewed by an impartial panel of U.S. and Canadian experts; if the panel finds that CMHC's decision is without technical merit, the U.S. tariffs will not be reduced until a satisfactory solution is reached.

If the CMHC finds that the C-D plywood is acceptable, then it could be used in about 20% of residential construction in Canada. This result would give the American industry a firm "foot in the door" in Canada and would be the partial realization of the industry's longstanding goal of gaining Canadian recognition of the C-D plywood.

With respect to softwood lumber, I know that a number of Members have been concerned whether we may have given up our rights to guard against Canadian subsidization of exports to the U.S. To the contrary, the FTA in no way affects our lumber Memorandum of Understanding (MOU) with Canada.

As you know, this MOU requires that Canada impose a 15 percent export tax to offset the advantages Canadian producers have enjoyed from low-priced Canadian timber. That tax will continue to be collected in Canada.

In addition, the MOU provides for Canadian government revision of provincial stumpage appraisal pricing schemes to eliminate the lumber subsidies which will result in a corresponding elimination of the export tax. The province of British Columbia has already revised its system and effectively raised its stumpage charges by about $500 million. In an agreement acceptable to U.S. domestic lumber interests, the U.S. and Canadian federal governments signed a revised MOU late last year principally approving the British Columbia "replacement measures."

Should the Canadians violate this MOU, we would use available authority, including the section 301 unfair trade statute, to obtain redress. The FTA fully recognizes this right.

We didn't get everything we want for the forestry sector in the FTA. For example, we fought hard, but unsuccessfully, for immediate elimination of tariffs on paper and furniture. The FTA provides an important first step in dismantling Canadian standards barriers to U.S. plywood, but not all such barriers are addressed by the FTA and efforts must continue to remove them. However, if you look at the entire range of issues related to the forestry sector, I hope you will agree that we were very successful overall.

The question on both sides of the border should be: "Will this Agreement make my country a better and more prosperous place to live a decade or a half century from now?" The objective answer to that question will be a resounding yes!

We must keep our eyes squarely on the long-range benefits for each nation as a whole. This Agreement will help both Americans and Canadians enter the 21st century more competitive and better prepared for the future.

We should approve this Agreement and then build on it in the future. It will, without doubt, be the most significant bilateral trade agreement either country has ever negotiated.

OFFICE OF THE UNITED STATES
TRADE REPRESENTATIVE
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON
20506

SUMMARY OF
THE U.S.-CANADA FREE TRADE AGREEMENT

February 1988

TABLE OF CONTENTS

Statement by the President..............................3

White House Fact Sheet..................................5

Brief Summary of Key FTA Provisions.....................8

Summary of the Agreement................................10
        Preamble..10
    Part One: Objectives and Scope.......................10
        Chapter One: Objectives and Scope................10
        Chapter Two: General Definitions.................10
    Part Two: Trade in Goods.............................11
        Chapter Three: Rules of Origin for Goods.........11
        Chapter Four: Border Measures....................12
        Chapter Five: National Treatment.................15
        Chapter Six: Technical Barriers..................15
        Chapter Seven: Agriculture.......................17
        Chapter Eight: Wine and Distilled Spirits........19
        Chapter Nine: Energy.............................21
        Chapter Ten: Trade in Automotive Goods...........23
        Chapter Eleven: Emergency Action.................25
        Chapter Twelve: Exceptions for Trade in Goods...26
    Part Three: Government Procurement...................27
        Chapter Thirteen: Government Procurement.........27
    Part Four: Services, Investment and Temporary Entry..28
        Chapter Fourteen: Services.......................28
        Chapter Fifteen: Temporary Entry for Business Persons..........29
        Chapter Sixteen: Investment......................31
    Part Five: Financial Services........................33
        Chapter Seventeen: Financial Services............33
    Part Six: Institutional Provisions...................35
        Chapter Eighteen: Institutional Provisions.......35
        Chapter Nineteen: Binational Dispute Settlement in Antidumping and Countervailing Duty Cases.....36
    Part Seven: Other Provisions.........................38
        Chapter Twenty: Other Provisions.................38
    Part Eight: Final Provisions.........................39
        Chapter Twenty-One: Final Provisions.............39

For Further Information.................................40

THE WHITE HOUSE

Office of the Press Secretary
(Palm Springs, California)

January 2, 1988

STATEMENT BY THE PRESIDENT

I am pleased to announce that Prime Minister Mulroney and I have today entered into an agreement to establish a free trade arrangement between the United States and Canada.

In the truest sense, this is an historic agreement for both sides. We will strengthen what is already a deep friendship between our people by enhancing economic opportunities and creating jobs in both countries. Moreover, the agreement firmly establishes that the trade environment between the two countries will in the future be founded on the principle of free and open trade.

This comprehensive agreement will benefit many sectors of the U.S. economy. Canadian and American tariffs will be phased out completely, saving consumers hundreds of millions of dollars while also improving our export opportunities. It will secure access to Canada's market for American manufacturing, agriculture, financial services, and high technology; improve national security through energy sharing; and provide important investment opportunities. Canada will benefit from the agreement in many of these same ways; the pact is truly reciprocal. As the agreement goes into effect, Canada's access to our large domestic market will grow, and Canadian industrial centers will gain opportunities to develop even more important roles in the economy of North America.

The agreement to establish a free trade area has important international implications as well. It will encourage supporters of free trade throughout the world by demonstrating that governments can remove trade barriers even in the face of protectionist pressures. We hope that the U.S.-Canada example will help set the tone for the Uruguay Round multilateral trade negotiations.

Our negotiations with the Canadian government leading to this agreement incorporated advice from Congress, industry, agriculture, and labor. Our Congress, as well as the Canadian Parliament, will review the agreement fully over the next several months. As this process begins, both sides should be mindful that the decisions they make will help shape the relationship between our

MORE

countries in the years to come, and will send a signal to the rest of the world.

The creation of the world's largest free trade area will be a mark of leadership and presents an historic opportunity to the United States and Canada. We must not let this opportunity slip from our grasp.

# # #

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release — January 2, 1988

FACT SHEET

U.S.-CANADA FREE TRADE AGREEMENT

The United States and Canada have entered into a free trade agreement that, if approved and implemented, will take effect on January 1, 1989. The agreement will:

- Eliminate all tariffs on bilateral goods trade within 10 years of implementation;
- Reduce nontariff trade barriers;
- Establish principles for the conduct of bilateral trade in services;
- Establish rules for the conduct of bilateral investment;
- Resolve many outstanding bilateral trade issues;
- Enhance the energy and national security of the two countries;
- Facilitate business travel; and
- Establish a timely bilateral dispute settlement mechanism.

Economic Implications

Each year the U.S. and Canada exchange more goods and services than any two countries in the world. Bilateral trade in goods and services exceeded $150 billion in 1986.

The elimination of tariffs and most other barriers to trade between the two countries will increase economic growth, lower prices, expand employment and enhance the competitiveness of both countries in the world marketplace.

Chronology of the Negotiation

- In March 1985, President Reagan and Prime Minister Mulroney asked their trade officials to explore ways to reduce and

MORE

eliminate existing barriers to trade between the U.S. and Canada.

- On September 26, 1985, Prime Minister Mulroney formally requested that the U.S. and Canada examine the potential for negotiating a comprehensive free trade agreement.
- On December 10, 1985, President Reagan notified the Congress of his intent to enter into bilateral negotiations with Canada using "fast track" procedures.
- On June 17, 1986, U.S. and Canadian negotiators on the free trade area met for the first time in Ottawa.
- On October 3, 1987, President Reagan notified Congress of his intent to enter into a free trade agreement with Canada.
- On December 9, 1987, U.S. and Canadian negotiators initialled a final text of the agreement.
- On January 2, 1988, President Reagan and Prime Minister Mulroney signed the final text of the agreement.

The Fast Track

Section 102 of the Trade Act of 1974 authorizes the President to enter into bilateral free trade agreements and to have the Congress approve them on a "fast track" basis. Section 102 authority expires at midnight on January 2, 1988.

In order for a bilateral agreement to qualify for fast track consideration, several conditions must be met:

- The negotiation must be requested by the foreign country;
- The President must notify the House Ways and Means and Senate Finance Committees of the negotiations, giving them 60 legislative days advance notice:
- The President must notify the Congress of his intent to enter into an agreement 90 days before doing so.

After entering into an agreement, the President must submit it to Congress, along with a draft implementing bill, a statement of any administrative action proposed to implement the agreement, an explanation of how the bill or statement changes or affects existing law and a statement of reasons why the agreement serves the interests of U.S. commerce and why the bill and proposed action are required and appropriate.

MORE

The implementing bill is introduced in both Houses of Congress on the day it is submitted and is referred to the committees of jurisdiction. House committees have 45 days in which the House is in session to report the bill; they are discharged automatically from further consideration after that period. The House votes within 15 days in session after the measure has been received from the House committees.

After receiving the bill from the House, the Senate committees have 15 days in which the Senate is in session to report the bill; they are discharged automatically from further consideration after that period. The Senate votes within 15 days in session after the measure has been received from the Senate committees.

Amendments to the bill are not in order. A simple majority of each House is required for approval.

# # #

BRIEF SUMMARY OF KEY FTA PROVISIONS

- Tariffs: Eliminates all tariffs on U.S. and Canadian goods by 1998.
- Rule of origin: Uses a rule of origin to prevent third country goods from receiving FTA tariff treatment.
- Customs: Ends customs user fees for goods and duty drawback programs by 1994 for bilateral trade and duty waivers linked to performance requirements by 1998 (except for the Auto Pact).
- Quotas: Eliminates import and export quotas unless allowed by the GATT or grandfathered by the FTA.
- National treatment: Reaffirms GATT principle preventing discrimination against imported goods.
- Standards: Prohibits use of product standards as a trade barrier and provides for national treatment of testing labs and certification bodies.
- Agriculture: Eliminates all bilateral tariffs and export subsidies and limits or eliminates quantitative restrictions on some products, including meat. Eliminates Canadian import licenses for wheat, oats and barley when U.S. crop price supports are equal or less than those in Canada.
- Wine and Distilled Spirits: Removes most discriminatory practices against wine or spirits imported from the other country.
- Energy: Prohibits most import and export restrictions on energy goods, including minimum export prices. Requires any export quotas used to enforce short supply or conservation measures to share resources proportionately. Provides for Alaskan oil exports of up to 50,000 barrels per day to Canada.
- Autos: Replaces and Canadian content rule for duty-free Auto Pact imports into the U.S. with tougher FTA content rule. (Most auto trade already is duty-free under the U.S.-Canada Auto Pact.) Does not change rules for Auto Pact-qualified companies importing duty-free into Canada, but does not allow new companies to qualify. Permits U.S. auto and parts exports that meet the FTA rule to enter Canada at FTA tariff rates, which phase out over 10 years. Ends all Canadian duty remission programs for autos by 1998.
- Emergency action: Allows temporary import restrictions to protect domestic industries harmed by imports from the other country in limited circumstances.

- Government procurement: Expands the size of government procurement markets that will be open to suppliers from the other country.

- Services: Commits governments not to discriminate against covered service providers of the other country when making future laws or regulations. (Exempts transportation services.)

- Temporary Visas: Facilitates travel for business visitors, investors, traders, professionals and executives transferred intra-company.

- Investment: Provides national treatment for establishment, acquisition, sale and conduct and operation of businesses. (Exempts transportation.) Commits Canada to end review of indirect acquisitions and to raise to C$150 million (in constant 1992 Canadian dollars) the threshold for review of direct acquisitions. Bans imposition of most investment performance requirements.

- Financial Services: Exempts U.S. bank subsidiaries in Canada from Canada's 16 percent ceiling on assets of foreign banks. Ends Canada's foreign ownership restriction on U.S. purchases of shares in federally regulated insurance and trust companies. Reviews U.S. firms' applications for entry into Canadian financial markets on the same basis as Canadian firms' applications. Permits banks in the U.S. to underwrite and deal in debt securities fully backed by the Government of Canada or political subdivisions. Guarantees continuation of multi-state branches of Canadian banks.

- General dispute settlement (except for financial services and countervailing duty and antidumping duty cases): Establishes a binational commission to resolve disagreements.

- CVD/AD dispute settlement (for countervailing and antidumping duties): Allows countries to continue to apply existing national laws. Replaces court review with a binational panel (when requested), which must apply national law in rendering decisions under international law.

- Softwood lumber: Preserves the 1986 agreement with Canada on provincial pricing practices.

- Culture: Exempts cultural industries from the FTA, but authorizes measures of equivalent commercial effect in response to actions otherwise inconsistent with the FTA.

SUMMARY OF THE AGREEMENT

Preamble

The Preamble to the Agreement describes the two countries' desire to improve their economies, to achieve full employment and increase living standards and to strengthen the competitiveness of both countries' firms in the global marketplace.

PART ONE: OBJECTIVES AND SCOPE

The first part includes chapters setting out the objectives and scope of the Agreement and defining key terms.

Chapter One: Objectives and Scope

The Agreement establishes a free trade area (FTA) consistent with the General Agreement on Tariffs and Trade (GATT), the multilateral agreement governing trade relations between 94 countries.

The objectives of the Agreement are to:

- eliminate barriers to trade in goods and services between the two countries;
- facilitate conditions of fair competition;
- significantly liberalize conditions for investment;
- establish effective procedures to administer the Agreement and resolve disputes;
- and lay the foundation for further bilateral and multilateral cooperation.

The federal governments agree to ensure that state, provincial and local governments take necessary actions in areas under their jurisdiction to implement the Agreement. They establish that the Agreement generally will take precedence over pre-existing agreements, except where specified, and they agree to treat each other's goods, services and investment as they treat their own to the extent provided in the Agreement.

Chapter Two: General Definitions

Words critical to the application of the Agreement are defined.

PART TWO: TRADE IN GOODS

Chapters three through twelve deal with trade in goods, building on the GATT and other agreements. Chapters three through six, eleven and twelve apply to all trade in goods. Chapters seven through ten apply to individual sectors.

Chapter Three: Rules of Origin for Goods

The Agreement will eliminate all tariffs between the U.S. and Canada, but each country will maintain its own tariffs on imports from other countries. Because of the disparities between U.S. and Canadian tariff levels, it is necessary to prevent imports from third countries from being shipped through one FTA partner into the other in order to escape the higher tariff.

Rules of origin are used to define those goods entitled to duty free treatment. Goods wholly produced in either the U.S. or Canada will qualify for FTA treatment. Goods containing imported inputs will qualify if they are processed enough to result in one of several specified changes in tariff classification under the internationally agreed Harmonized System; that is, they must be changed in ways that are physically and commercially significant. In some cases, there is the explicit requirement that at least half of the cost of manufacturing the goods must be attributable to Canadian and/or American materials and/or direct costs of processing. Finally, there is a safeguard provision denying FTA treatment to any goods altered merely to circumvent the rules of origin.

Goods that are further processed in a third country before being shipped to their final destination will not qualify for FTA treatment. For example, goods produced by either U.S.- or Canadian-owned maquiladora operations in Mexico will not qualify.

Apparel made from fabric woven in the U.S. or Canada will be duty-free but apparel made from imported fabric will qualify for FTA treatment only up to the following levels:

	Non-Woolen Apparel	Woolen Apparel
	(in million-square-yard	equivalent)
Imports from Canada	50	6
Imports from the U.S.	10.5	1.1

Non-woolen fabric and made-up textile articles, woven or knitted in Canada from yarn produced or obtained in a third country, will qualify for FTA treatment for three years, but only up to an annual level of 30 million square yards.

The two governments will consult regularly to ensure that the rules of origin are operating effectively and to consider changes to the rules where experience suggests changes may be helpful.

Chapter Four: Border Measures

The central element of a free trade area is the elimination of substantially all tariff and nontariff trade barriers.

Tariffs

All bilateral tariffs will be eliminated in stages by January 1, 1998. The removal of tariffs will increase two-way trade and lower costs to consumers in both countries, thereby creating a single U.S.-Canadian market of 265 million people. Approximately 75 percent of bilateral merchandise trade, currently in excess of $120 billion, already moves free of duty. The remaining 25 percent, however, is subject to tariffs. Canadian tariffs average about 9-10 percent, or about twice the U.S. average of approximately 4-5 percent.

The results of the tariff negotiation are expressed in terms of the new Harmonized System (HS) of tariff nomenclature. (If either country fails to adopt the HS, duties will be eliminated by converting the schedule of reductions back to current tariff schedules.) All dutiable products in the HS were assigned to one of the following three staging categories: (1) immediate elimination; (2) five equal, annual cuts (20 percent per year), and (3) ten equal, annual cuts (10 percent per year). In almost all instances, staging on a particular product is the same in both countries. The stages for various commodities were selected in recognition of the fact that industries in both countries will require varying periods of adjustment to changing competitive conditions.

Import-sensitive industries on both sides of the border were generally accorded 10-year staging, which would result in the duty being eliminated by January 1, 1998. These include plastics, rubber, most wood products, lead, zinc, base metal articles, footwear, textiles and apparel, steel, many alcoholic beverages, consumer appliances, precision instruments, watches and most agricultural and fish products.

Immediate duty elimination is scheduled for such products as automatic data processing and related equipment, certain telecommunications equipment, motorcycles, whiskey and rum, some processed fish, raw hides, leather and furs.

All other duties will be phased out by January 1, 1993. Included within this category are paper, furniture, printed matter, chemicals, after-market automotive parts, precious jewelry, most machines, some musical instruments, and petroleum.

The Agreement provides that tariffs can be reduced faster whenever the two governments agree.

Customs Programs and Procedures

The Agreement eliminates duty drawback for bilateral trade, duty waivers linked to performance requirements (except as provided in the chapter on automotive trade), and the U.S. customs user fee for Canadian merchandise. It authorizes importers and exporters to certify that goods meet the rules set out in the rules of origin chapter and are therefore eligible for FTA tariff treatment. These measures are intended to prevent imports from third countries from benefiting from the FTA.

Duty Drawback: Both countries will end duty drawback on exports to the other as of January 1, 1994, with limited exceptions. Most countries, including the United States and Canada, have duty drawback programs, which provide for the return of duties on imports when they or substituted domestic goods are incorporated in goods subsequently exported. Because of the elimination of bilateral tariffs, continuation of duty drawback between the two parties would allow duty free-entry of third-country imports through the other FTA party and would distort trade and investment decisions.

As an exception to the ban on duty drawback for bilateral trade, the following goods will continue to benefit from the program:

- goods remaining in the same condition on exportation as on importation (but they would not benefit from FTA tariff treatment),
- dutiable goods of the United States or Canada if they are incorporated into, or directly consumed in, the production of goods subsequently exported back to the FTA partner, and
- goods where both parties agree to maintain duty drawback (this category consists of (1) imported citrus products and (2) fabric imported from a third country and made into apparel that is subject to the most-favored-nation (MFN) tariff when exported to the other party).

Also, beginning January 1, 1994, goods withdrawn from a Foreign Trade Zone (FTZ) or benefiting from a similar program will be treated the same whether destined for consumption in the U.S. or Canada. For a good made in a U.S. FTZ, duty must be paid on the value of any foreign components at either the component or the finished-good tariff rate. Maintaining the full benefits of these programs, like duty drawback programs, would have allowed imports from third countries to enter duty-free through the other FTA party and would distort trade and investment.

Duty Waiver: Neither party will introduce new duty waivers or expand existing ones linked to performance requirements after the later of June 30, 1988 or the date of Congressional approval of the Agreement. Existing programs will be eliminated by January 1, 1998. This provision ends the trade-distorting practice of requiring a firm to buy local inputs or to export output in exchange for a tariff exemption.

The 1998 termination date excludes certain waivers affecting automotive trade, as specified in the section on automotive trade. The countries reserve existing rights under other agreements with respect to the Auto Pact or comparable arrangements. This provision maintains the U.S. right to challenge Canadian performance requirements under GATT rules.

If a party can show that a duty waiver to a specific firm granted on a commercial good hurts its commercial interests, then the party granting this waiver must either make it generally available to any importer or end the program. This provision prevents discrimination among firms.

Customs Fees: Starting on January 1, 1990, the U.S. must cut by 20 percent each year the customs user fee on goods qualifying under the rule of origin of the FTA. The fee on Canadian goods will be eliminated as of January 1, 1994. Neither country may introduce new customs user fee programs to pay for the costs of Customs administration on goods from the other country.

Customs Procedures: The Agreement authorizes the governments to require importers to submit a written declaration of origin based on a written declaration of origin provided by the exporter. It requires each country to make it unlawful for the exporter to provide a false certification. False declarations by either the importer or the exporter could be prosecuted by the government of the country in which the offending business is located. This provision will help avoid fraudulent claims of FTA origin to avoid tariffs.

The Agreement also provides for cooperation on enforcement, consultations on uniform application of the rule of origin, review and appeal procedures for decisions on the rule of origin and consultations on major changes affecting customs administration.

Import and Export Restrictions

Import and export quotas and other restrictions can distort trade flows. The elimination of such barriers is essential to an effective free trade area. Unless specifically grandfathered by the Agreement or allowed by the GATT, existing quantitative restrictions will be eliminated immediately or according to a timetable. Some specified restrictions that have been exempt from GATT obligations will be eliminated for trade between the U.S. and Canada.

In all cases where quantitative restrictions are prohibited under the Agreement, use of minimum export prices and minimum import prices (except those used to enforce countervailing duty and antidumping orders) also are prohibited.

Where either country prohibits imports from a third country, it may similarly prohibit the pass-through of imports from that country through the FTA partner. This provision preserves the right to enforce embargoes for foreign policy or other reasons (e.g., embargoes against Cuba or Iran).

Export taxes will not be permitted under the Agreement unless the tax is also levied on goods destined for domestic consumption. In addition, where GATT-permitted export restrictions are applied (such as in the event of a short-supply emergency), the restriction must not reduce the proportion of the good that was exported to the FTA partner relative to the total supply of the good prior to the restriction.

Chapter Five: National Treatment

The Agreement incorporates the GATT requirement that, once imported into either country from the other, goods will not be the object of discrimination. This ensures that the elimination of border measures will not simply be replaced by internal measures favoring domestic goods over imports. This rules out higher sales or excise taxes or regulatory requirements on imports. Discrimination against goods from the other country by provinces or states is prohibited even if a province or a state discriminates against goods from other provinces or states.

Chapter Six: Technical Barriers

There are legitimate public policy objectives for which technical regulations and standards are maintained (e.g., to protect human, animal or plant life or health; to preserve the environment; and to protect essential security interests). However, standards measures may work to inhibit trade.

The Agreement builds on current obligations under the GATT Standards Code not to use standards to hinder trade unnecessarily. Certification and testing facilities will receive nondiscriminatory treatment in both countries. We also agree to work to harmonize our standards where appropriate so that similar products do not have to be made or work in different ways in order to be sold in the other country. Provisions of this chapter do not apply to agricultural goods, which are covered in the chapter on agriculture.

These provisions do not mean that the U.S. will have to adopt the metric system or Canadian standards, or that standards cannot be adopted for legitimate regulatory reasons. The basic rule remains that standards must not create unnecessary obstacles to trade. Obstacles to trade are not created where the demonstrable purpose of standards-related measures is to protect health and safety, environmental, national security and consumer interests. However, such measures must not operate to exclude goods of the other country if they meet these objectives.

Both countries will assure that testing facilities and certification bodies are treated in a nondiscriminatory manner. This paves the way for the recognition by Canadian authorities of U.S. facilities and bodies. This does not require that all testing labs receive accreditation, especially if an individual lab is not qualified in the view of the accrediting authority, but forbids the discrimination against labs on the basis of nationality.

Canada and the United States agree to harmonize (make compatible) federal standards-related measures to the greatest extent possible, and to promote harmonization of private standards. The Agreement does not require that standards and technical regulations be harmonized but provides for it where appropriate. State and private standards-setting bodies are not obligated under any of these provisions.

Both countries will provide for enhanced transparency in the regulatory process. To this end, we will expand our information exchange and guarantee a 60-day comment period on proposed standards-related regulations at all levels. This is important to manufacturers because they need to know about regulatory changes which may affect their products so that they can prepare for the changes, and have some say in them. Similar provisions will apply for state, provincial, and private standards activities at a "best efforts" level.

Processes and production methods are included as standards-related measures subject to the provisions of the Agreement. This provision makes clear that specifying how a product is made is just as much a standards-related measure, and subject to the rules of this section, as specifying how the product should perform.

Both countries will recognize each other's systems for accrediting testing labs. Currently, this is a small program operated by the National Bureau of Standards in the U.S. and the

Canadian Standards Association in Canada to accredit testing labs. Labs accredited under one program will automatically receive recognition in the other country.

Chapter Seven: Agriculture

The U.S. and Canada agree that the achievement of our major trade objectives for our agricultural sectors will require multilateral solutions and accordingly will work together in the Uruguay Round and other fora to liberalize agricultural trade. Nevertheless, the FTA includes provisions providing U.S. and Canadian agricultural producers increased opportunities to market their products in the future with no tariff barriers and with fewer nontariff barriers.

Various barriers to trade in agriculture have arisen in recent years in an attempt to stabilize the agricultural economy. Quotas, import licenses, technical requirements and subsidies have all had a negative effect on trade in agricultural products. The Agreement provides for a number of liberalizing measures in an era of increasing protectionism.

The Agreement provides for semi-annual consultations between the U.S. and Canada on agricultural issues. It also provides that each country shall retain its rights and obligations under the GATT except as otherwise provided.

Tariffs

All agricultural tariffs between the U.S. and Canada will be eliminated within 10 years, thereby facilitating trade and leading to higher efficiency. The agricultural sectors likely to be most affected by the tariff elimination will be fresh fruits and vegetables because some of the highest agricultural tariffs are applied on those products.

Both countries will reserve the right, for 20 years, to apply a temporary duty on designated fresh fruits and vegetables to protect their domestic producers from import surges from the other country. This provision will facilitate a smooth transition to a tariff-free border for both countries, providing a mechanism to prevent unnecessary hardship to fruit and vegetable producers. The temporary duty can only be triggered if (1) the import price falls below 90 percent of the previous five-year average monthly import price for five consecutive days, and (2) the planted acreage in the importing country is not higher than the previous five-year average for the particular fruit or vegetable. The total duty applied under this provision cannot cause the total duty on these products to exceed the lesser of the most-favored-nation (MFN) duty that was in effect for the corresponding season prior to the Agreement or the then current MFN duty. Moreover, it can be applied only once per year per product for no longer than 180 days. The temporary duty will be removed immediately once the import price exceeds 90 percent of the five-year average for five consecutive days.

Subsidies

The U.S. and Canada have agreed to work together to achieve, on a global basis, the elimination of all subsidies which distort agricultural trade through multilateral negotiations such as the Uruguay Round. This is consistent with the U.S. proposal for agriculture in the Uruguay Round. The FTA partners have agreed not to use export subsidies on agricultural goods exported directly or indirectly to the other country. Each country has also agreed not to sell agricultural goods in the other country at a price below the acquisition price plus handling, storage and other costs. This will prevent the use of practices such as dual pricing. The Agreement will not limit other forms of production subsidies in either country.

Canada has agreed to exclude from the transport rates established under the Western Grain Transportation Act (WGTA) agricultural goods originating in Canada and shipped via West Coast ports for consumption in the U.S. These subsidies were instituted by Canada in 1984 as an expansion of the Crow's Nest Act. It is anticipated that this will primarily affect shipments of millfeed and rapeseed meal into the U.S. Pacific Northwest. The Agreement will not affect WGTA subsidies on shipments through Eastern ports (Thunder Bay), which are not conditioned on export and have been in place since 1897.

These provisions do not prevent imposition of antidumping or countervailing duties.

Access Issues

Grains: Canada has agreed to eliminate import licenses for U.S. wheat, barley, oats and their products when U.S. government support for the particular crop is equal to or less than that of Canada. Each country will calculate its own support level in accordance with a methodology set forth in the Agreement. There is a mechanism to resolve any disagreement over the other country's calculation. When it occurs, the elimination of licenses will provide greater access for the U.S. to the Canadian market for both grains and processed products containing grains.

The Agreement will not affect the ability of either country to legislate changes in domestic support programs for agricultural products. Both countries have also reserved the right to impose or reimpose import restrictions on particular grains if imports increase significantly as a result of a substantial change in either country's support programs for that grain.

Meat: In evidence of the spirit of free trade, the two countries will exempt each other from import quotas applied under their respective meat import laws, unless those imports are frustrating import restrictions on meat imports from other countries. This is a further step ensuring access to each other's markets. This provision will not allow the transshipment or substitution of meat from third countries to circumvent the respective meat import laws. Direct third country access to the U.S. for meat will remain unchanged by the Agreement.

Poultry and Eggs: Canada has agreed to increase the base level for its import quotas for eggs, chicken, turkey and products thereof to a level reflecting total shipments over the last five years. This provision will increase the amount of guaranteed access into Canada. As a result of the tariff reductions, U.S. exporters should have a competitive advantage over other potential supplying countries for the increased quotas.

Sugar: The U.S. has agreed not to impose import restrictions on products from Canada containing ten percent or less sugar for purposes of restricting the sugar content of those products. This provision will not limit the ability of the U.S. to restrict the entry of processed products with higher than ten percent sugar content for purposes of protecting the sugar program.

Technical Regulations

The U.S. and Canada have agreed to work together to harmonize, to the greatest extent possible, technical regulations affecting agricultural, food, beverage and certain related goods. These provisions will facilitate trade for both countries by eliminating, where possible, technical requirements that can amount to non-tariff trade barriers. Specific schedules address the following areas: feeds; fertilizers; seeds; animal health; veterinary drugs; plant health; pesticides; food, beverage and color additives; packaging and labeling; meat, poultry and egg inspection; dairy, fruit and vegetable inspection, and unavoidable contaminants in food and beverages.

Chapter Eight: Wine and Distilled Spirits

Export opportunities for U.S. producers of alcoholic beverages have been limited by measures in Canada that discriminate against the internal sale and distribution of imported products in Canada. The Agreement does not prohibit the regulation of alcoholic beverages in either country, but does eliminate the most significant existing discriminatory practices in Canada and prohibit discrimination against the products of the other country for all new regulations.

Listing measures (limits on brands or types of products that may be sold) must no longer discriminate against wine or distilled spirits of the other country. The lone exception to this requirement is that the province of British Columbia may continue to grant automatic listing to certain estate wineries, provided that listing measures do not otherwise discriminate. Criteria for decisions on listings must be based on normal commercial considerations and listing measures cannot be used to create disguised trade restrictions. Further, listing measures must include procedures for a fair a expeditious appeal when an application for a listing is denied.

The Agreement requires the elimination of discriminatory pricing measures for wine and distilled spirits, including charging a higher markup for U.S. products than locally produced products. Any existing markups must be eliminated when the Agreement is implemented for distilled spirits and must be phased out by January 1, 1995 for wine (with half of the differential to be eliminated by January 1, 1990). Differential pricing measures may only be maintained if the differential between products of the two countries does not exceed the additional cost of service for imported products relative to domestic products. Any such cost of service differential will be subject to audit to ensure it reflects actual higher costs rather than arbitrary protection for local products.

The Agreement prohibits discrimination between Canadian and U.S. wine and distilled spirits in terms of the distribution system for these products. However, on-premise sales by a winery or distillery solely for items produced by them may continue. Private wine store outlets existing on October 4, 1987 in Ontario and British Columbia may continue to discriminate in favor of wine produced in those provinces, but distribution measures in those provinces must otherwise provide nondiscriminatory treatment. Quebec is also allowed to continue to require that wine sold in grocery stores must be bottled in Quebec, as long as alternative outlets for U.S.-bottled wine are provided.

Canada has also agreed to eliminate any measures which require that distilled spirits imported in bulk must be blended with Canadian spirits in order to be sold in Canada.

Canada will recognize Bourbon Whiskey as a distinct product manufactured in the United States and the United States will recognize Canadian Whiskey as a distinctive product of Canada.

Tariffs

Tariffs on whiskey and rum will be eliminated when the Agreement takes effect. Tariffs on other distilled spirits, wine and beer will be phased out in ten equal annual amounts so that duty free status will be obtained on January 1, 1998.

Chapter Nine: Energy

Energy is the single most important input for a developed economy. Without it, there could be no basic industries such as chemicals, steel and other primary metals, autos, aviation, and pulp and paper. All of these industries require energy as a key input and some also manufacture products whose use depends on the availability of energy. Thus, assuring secure supplies of energy at stable and reasonable prices is an essential priority of U.S. economic and trade policy.

The U.S. is the world's largest energy consumer. Although we are also one of the leading producers of energy, the requirements of our economy for various forms of energy are so great that we must import significant amounts of energy to meet these needs. Canada is by far our largest energy supplier. We import more crude oil and petroleum products from Canada than from Saudi Arabia, Venezuela or Mexico. Canada supplies almost all of our natural gas and electricity imports, and more than two-thirds of our uranium imports. In addition, Canada is our largest coal export market. The U.S. and Canada share the world's largest bilateral energy trade relationship, with two-way trade of $10 billion per year or more.

Regrettably, the history of this trade has been marked by a considerable degree of government intervention on both sides, in the form of export restrictions, minimum export price requirements, import fees and quotas, and various other trade restrictions. There have also been domestic programs in each country which have distorted trade both in energy itself and in energy-intensive products such as petrochemicals. While these past actions have often been in response to short-term concerns, they have generally worked to the longer-term disadvantage of both countries. At times, artificially low prices have stimulated excess demand while suppressing supply and thus causing shortages. At other times, artificially high prices have stifled economic activity throughout the economy, especially in energy-intensive industries. Overall, the uncertainty about future government energy trade policies and actions has inhibited investment in energy production and energy consuming industries in both countries.

The Agreement builds on the lessons learned from the past by renouncing excessive government interference in our future energy trade and provides a framework for rational economic development of that trade. Because it will encourage the most efficient system for production, distribution and use of energy between the two countries, it will enhance the energy security of both countries. It should also result in lower overall energy costs over the longer term, which will contribute significantly to the international competitiveness of basic industries in each country.

The energy goods covered by the Agreement include petroleum, natural gas, coal, electricity, uranium and other nuclear fuels.

The Agreement reaffirms the rights and obligations of both the United States and Canada with respect to the GATT prohibitions on import and export restrictions. Moreover, it makes explicit that both countries interpret the GATT to prohibit minimum export price requirements. In addition, the Agreement extends the GATT discipline to cover a prohibition on export taxes.

In an annex, the Agreement lists three specific changes to conform existing laws to these commitments: (1) The U.S. will exempt Canada from any potential restrictions on enrichment of foreign uranium which might be imposed under Section 161v of the Atomic Energy Act; (2) Canada will exempt the U.S. from its export restrictions on unprocessed uranium; and (3) the U.S. will allow Canada access to a maximum of 50 thousand barrels per day of Alaskan oil currently restricted from export under Section 7(d) of the Export Administration Act, subject to the condition that this oil will be transported to Canada from a suitable location in the Lower 48 States.

The Agreement affirms that, as provided by the GATT, either country may restrict exports where necessary to respond to supply shortages, to maintain a domestic price stabilization program or to prevent exhaustion of a finite energy resource. However, it may impose a restriction only if the restriction (1) does not reduce the proportion of total supply historically available to the other country; (2) does not disrupt the normal channels of supply or mix of energy products; and (3) does not impose a higher price on exports than for comparable domestic sales. What this means is that neither country will treat the buyers or sellers of energy of the other country as "second-class" customers or suppliers. Canada gains assured market access for its energy exports to the U.S., and the U.S. gains assured access to Canadian supplies for its imported energy requirements.

The Agreement provides for consultation in the event either country believes the energy regulatory actions of the other country would directly discriminate against its energy goods or businesses.

An annex to the Agreement lists regulatory changes to be made to conform to the Agreement. Canada will eliminate its electricity export price test that requires the export price to be not significantly less than the least-cost alternative available to the importer. Other Canadian export tests (price tests and "surplus" tests) must be administered in a manner consistent with the principles of the Agreement.

The U.S. will eliminate any discriminatory treatment of British Columbia Hydro vis-a-vis comparably situated U.S. utilities in terms of access to the Bonneville Power Administration Intertie into the California electricity market. In addition, it is expected that long-term arrangements will be negotiated to assure the development of electricity trade in a mutually beneficial manner consistent with the objectives and principles of the Agreement.

The Agreement recognizes the importance of government incentives for oil and gas resource development to the energy supply security of both countries and, therefore, allows such incentives to be maintained or created. This provision does not prevent the imposition of antidumping or countervailing duties.

The Agreement provides for only quite narrow exceptions to the prohibition on trade restrictions in situations involving national security; these are limited to situations of militarily related national security. The Agreement declares that there is no inconsistency between this Agreement and the obligations of either country under the International Energy Program of the International Energy Agency.

Chapter Ten: Trade in Automotive Goods

Automotive trade accounted for over one-third, or $46 billion, of the total bilateral trade between the U.S. and Canada in 1986. Under the U.S.-Canada Automotive Products Trade Agreement (Auto Pact) of 1965, 95 percent of bilateral automotive trade already moves duty-free. As a result of the FTA, all automotive trade will be duty-free, as long as it meets the rule of origin.

The U.S. and Canada have agreed to the removal of tariff and nontariff barriers and new origin rules designed to assure that the benefits of the FTA accrue to North American auto and auto parts producers. By removing trade and investment distorting practices, the FTA will encourage greater efficiency in motor vehicle production and will provide greater assurance that economic factors determine trade and investment choices between the U.S. and Canada.

Tariffs and Rule of Origin

All tariffs on U.S. and Canadian motor vehicles and parts will be eliminated by January 1, 1998. Most will be phased out over 10 years, but tariffs on aftermarket parts will be eliminated in five years.

The FTA rule of origin which is described in the chapter on rules of origin will apply to all U.S. imports of Canadian automotive products, but only to Canadian imports of U.S. automotive products not entering Canada under the Auto Pact. The FTA rule is based on change in Harmonized System tariff classification and includes a 50 percent U.S.-Canadian direct cost of manufacturing test for vehicles and specified assembled parts.

Here is how the new FTA rules and the existing Auto Pact will work for imports of autos and parts into the U.S. from Canada:

> The FTA rule of origin will replace the rule currently used by the U.S. to implement the Auto Pact. Upon implementation of the FTA, those motor vehicles and original equipment parts currently eligible for duty-free entry under the Auto Pact will be able to enter the U.S. duty-free only if they meet the new FTA rule of origin. Other auto parts that meet the FTA rule of origin will pay the FTA tariff until it is fully eliminated. Motor vehicles and parts that do not meet the FTA rule of origin will pay the full current most-favored-nation (MFN) duty, not the FTA duty.
>
> The new rule of origin is tougher in that it requires that substantial manufacturing costs (materials and direct processing costs) be incurred in the U.S. and/or Canada, while the current test only assures that substantial costs (which can include advertising and overhead) or profits are incurred in the U.S. and/or Canada. This change will help both U.S. and Canadian auto parts manufacturers.

Here is how the new FTA rules and the existing Auto Pact will work for imports of autos and parts into Canada from the U.S.:

> Canada's criteria for duty-free access into Canada under the Auto Pact will not change. Qualified producers (those that meet Canada's performance requirements) will continue to be able to import motor vehicles and parts into Canada duty-free from anywhere in the world. However, it has been agreed in the FTA that no new firms may qualify for Auto Pact or Pact-like benefits in Canada, except for the General Motors-Suzuki (CAMI) joint venture, if it qualifies by the 1989 model year.
>
> For companies not meeting Canada's Auto Pact performance requirements, the FTA tariff will apply (until it is fully eliminated) to products imported from the U.S. that meet the FTA rule of origin. Motor vehicles and parts that do not meet the FTA rule of origin will pay the full current most-favored-nation (MFN) duty, not the FTA duty.

Duty Remission

Canada's export-based duty remission program will be eliminated January 1, 1989 on exports to the U.S. and terminated in all cases by January 1, 1998. The export-based duty remission program allows firms in Canada to reduce duties on motor vehicle and part imports in proportion to the Canadian value-added in their exports of automotive parts.

Canada's production-based duty remissions will end by January 1, 1996 or earlier as contracts expire. Production-based duty remissions allow firms that are not members of the Auto Pact in Canada to avoid duties on automotive imports into Canada as long as they meet Canadian local content requirements.

There will be no new recipients of any Canadian automotive duty remission benefits, and current benefits will not be enhanced. U.S. and Canadian auto parts manufacturers will benefit from the elimination of these measures, which distort trade and investment.

Other Provisions

Canada will phase out its embargo on the importation of used vehicles over five years.

A Select Panel will be established to assess the state of the North American industry and to propose public policy measures and private initiatives to improve its competitiveness in domestic and foreign markets.

Chapter Eleven: Emergency Action

One of the basic tenets of the GATT trading system is that countries should be allowed to take temporary emergency actions restricting imports in order to remedy serious injury caused by increased imports. The drafters of the GATT recognized that a country would be more willing to enter into contractual obligations to reduce its trade barriers if it were able to reimpose the duties when and if imports of a particular product increased to such an extent as to cause injury to one of its industries producing a competing product. Both the U.S. and Canada have established "safeguard" procedures to provide emergency relief to domestic industries injured by imports.

The Agreement provides a two-track system aimed at preserving the existing rights of workers and firms in both countries to gain relief from import-related injury, while at the same time assuring the U.S. and Canadian business communities that the trade expansion created by the FTA will not be suddenly and arbitrarily cut back. Although the U.S. and Canada have not used such actions against each other very often, the possibility of taking actions reduces certainty of market access.

In the United States, domestic producers and workers will have access to relief under special revised provisions of Section 201 of the Trade Act of 1974.

Under the bilateral track, if imports resulting from FTA duty reductions cause serious injury, the importing country may reinstate the pre-Agreement tariff or current MFN duty (whichever is lower), or suspend duty reductions. This can be done only once per product during the ten-year transition period for no longer than three years. After the transition period, such actions can only be taken by mutual agreement.

Under the global track, the FTA partners retain their GATT rights except that the importing country must exclude the other from an action involving other countries unless that country's imports are substantial and are found to be contributing importantly to the injury from imports. For purposes of this track, imports in the range of five percent to ten percent or less of total imports would normally not be considered substantial. "Contributing importantly" means an important cause, but not necessarily the most important cause.

If the exporting country is initially excluded from an import relief action, the importing country has the right to subsequently bring that country's trade under the import restraint action in the event of a surge in imports from that country. In no event may the exporting country's exports be cut back below the level they reached during a reasonable recent base period.

The FTA partner taking either a bilateral or global action must provide compensation aimed at expanding trade in another product or the exporting FTA partner may take a substantially equivalent retaliatory action.

Disputes arising after an action is taken are subject to binding arbitration under the dispute settlement provisions of the FTA.

Chapter Twelve: Exceptions for Trade in Goods

The Agreement incorporates the provisions of the GATT allowing for exceptions from GATT rules for limited reasons, such as to protect public health or morals or national treasures.

It also specifies certain miscellaneous exceptions from the FTA, including both countries' export controls on logs and existing East Coast Canadian export restrictions on unprocessed fish. Both countries' practices on the internal sale and distribution of beer are also exempted, but amendments to existing practices cannot deviate more from the obligations of the Agreement, and new measures must conform with the FTA.

GATT rights with respect to measures exempted from the FTA are expressly preserved.

PART THREE: GOVERNMENT PROCUREMENT

The general provisions regarding goods trade in Part Two do not apply to purchases of goods by governments.

Chapter Thirteen: Government Procurement

The Agreement expands the size of the government procurement markets which will be open to free and fair competition between U.S. and Canadian suppliers. It also establishes a solid framework for further elimination of "buy national" restrictions that presently inhibit sales by U.S. exporters to Canada.

The procedures used in the Agreement for government purchases build upon the open and competitive principles and procedures of the GATT Government Procurement Code. It improves Procurement Code procedures by establishing a common rule of origin, requiring an effective bid challenge system for all potential suppliers and improving transparency of bid selection, particularly for procurements which are single tendered. The U.S. currently provides for effective bid challenge procedures but Canada does not.

The U.S. and Canadian governments apply various buy national preferences in favor of suppliers of domestic goods. These preferences inhibit -- and in some cases prevent -- competition from foreign products. Under the Agreement, suppliers of goods which are manufactured in the U.S. and Canada and which contain at least 50 percent U.S. or Canadian content will be treated on an equal basis to suppliers of domestic goods for covered procurements.

"Buy American" and "Buy Canadian" restrictions are eliminated on the procurement of goods by U.S. and Canadian entities covered by the GATT Government Procurement Code between the Code threshold (for 1987, $171,000) and an FTA threshold of $25,000, and are subject to the same exclusions and exceptions as those covered by the Code.

Viewed in conjunction with the Procurement Code, the FTA will allow U.S. exporters to compete on a nondiscriminatory basis for all Code-covered procurements over $25,000.

The value of procurement opportunities covered by this chapter is estimated at approximately $3 billion of U.S. procurement and $500 million of Canadian procurement. Previously a majority of Canadian purchases were below the Code threshold, versus a small minority for U.S. entities. Therefore, Canadian entities will open a much higher percentage of procurements under the FTA than will U.S. entities. As a result of the new opportunities offered by Canadian entities under this chapter, procurement opportunities in Canada for U.S. exporters are increased by more than 100 percent.

Principles are established for bid challenge procedures. These include a requirement that a reviewing authority with no substantial interest in the outcome of the procurement be responsible for deciding bid challenges. Suppliers may protest government procedures on their own initiative and receive timely settlement of complaints.

Each government must provide transparency in its procurement process. Public notice must be provided of all the criteria it intends to use in evaluating a bid (including offsets) and the award must be based on those criteria.

Within one year after the conclusion of the current multilateral negotiations on the GATT Procurement Code, there will be an opportunity to improve and expand coverage of this chapter by further negotiations with Canada.

PART FOUR: SERVICES, INVESTMENT AND TEMPORARY ENTRY

GATT rules cover trade in goods only. Services and investment are not covered. The FTA goes beyond traditional GATT areas to establish rules in these areas that break new ground and set an important precedent for the Uruguay Round of multilateral trade negotiations, in which GATT countries are considering whether to extend GATT disciplines to these new areas.

Chapter Fourteen: Services

The Agreement breaks new ground by providing rules governing trade and investment in services industries. Both the U.S. and Canada have relatively open markets for services. The Agreement will ensure continued openness by providing that future laws and regulations will not discriminate against services providers of the other country.

A wide range of services industry sectors are covered by the agreement, including: construction, tourism, insurance, telecommunications-network-based enhanced services and computer services, some professional services, services relating to mining and agriculture, wholesale and retail trade, management services and other business services. Transportation services are not covered.

Future U.S. and Canadian government measures such as laws, regulations or licensing requirements affecting services trade and investment must not have the purpose or effect of discriminating between the services providers of either country. The right of establishment, the right to sell across the border, and greater transparency in regulations are also provided. The Agreement does not affect subsidies for or government procurement of services.

There are annexes which clarify the application of the services agreement to architecture, tourism, and telecommunications-network-based enhanced services and computer services.

In architecture, both sides will review the work of professional organizations to develop mutually acceptable standards.

In telecommunications-network-based enhanced services and computer services, the Agreement ensures the future development of an open and competitive market including access to and use of the basic telecommunications network.

In tourism, the Agreement ensures continued open markets for tourists and tourism service providers.

The Agreement provides the opportunity for future negotiations to increase liberalization, sectoral coverage and other obligations.

Chapter Fifteen: Temporary Entry for Business Persons

The U.S. and Canada have agreed that as a part of the special trading relationship established by the Agreement, it is desirable to facilitate temporary entry for business persons into the territory of each country on a reciprocal basis. The Agreement and immigration laws of both countries will provide transparent criteria and procedures for temporary entry of certain persons who conduct trade in goods and services as well as investment activities, while maintaining necessary provisions to ensure border security and protect indigenous labor and permanent employment. These provisions facilitate entry for citizens of each country into the territory of the other on both a short- and long-term basis depending on the type of commercial activity involved.

The two countries agree to provide temporary entry for business persons through transparent laws and regulations and to provide explanatory materials in order to enable business persons to become acquainted with such laws and regulations. These provisions will be applied in a manner that provides the desired entry without undue delay or impairment in the conduct of trade and investment under the Agreement.

The countries will exchange data on temporary entry and consult at least once a year concerning the operation of the Agreement and consider provisions that may further enhance temporary entry, including amendments and additions to coverage of persons under the Agreement.

Should a dispute arise concerning the provisions of this chapter, it may be referred to the dispute resolution provisions of the Agreement if the matter involves a pattern of practice and available administrative remedies have been exhausted.

Coverage of persons involves Business Visitors and Professionals who shall be admitted without prior approval procedures, petitions, labor certification tests, or other procedures having similar effect, as well as Intra-Company Transferees and Traders and Investors who will no longer face labor certification tests or other similar procedures.

Business Visitors

A business person engaged in one of the covered occupations and entering for the described purpose shall be granted entry under Schedule 1 of the Agreement. This schedule defines the persons involved in a number of business areas and the activities undertaken. The approach provides transparency and specificity to a number of areas of business activity that have in the past been unclear or subject to conflicting interpretation.

One important provision allows persons of either country to provide after-sales service for the length of the contract or warranty period on commercial or industrial machinery and equipment or computer software that has been purchased outside its territory. This allows firms to better provide after-sales service functions that are often a necessary component in the sale of complex machinery, equipment and computer software.

Traders and Investors

A business person seeking temporary entry in order to carry on substantial trade in goods or services in a capacity that involves supervisory, executive or essential skills, or to direct the operations of an enterprise in which the person has invested, shall be granted temporary entry under new, liberalized procedures in the Agreement. The new provisions provide business persons the assurance that after they have received an initial certification, they may freely enter as often as their business needs require.

Professionals

The FTA partners will admit persons who are members of certain professions and engaged in their related business activities. Coverage includes the generally recognized professions such as engineers, architects, and certain scientific and technical specialties. The Agreement also covers newer professions such as management consultants. Revised procedures should provide improved processing of entry requests.

Intra-Company Transferees

Intra-company transferees, when engaged in managerial or executive activities or possessing specialized knowledge, will be admitted. Requirements that certain companies train replacement personnel have been removed.

Chapter Sixteen: Investment

For U.S. investment in Canada, the Agreement builds on the substantial liberalization measures already taken by the present Canadian government. It freezes those measures in place and bars most new measures which would adversely affect U.S. investment.

For its part, the U.S. will continue its open investment climate for Canadian investors in accord with the basic principles set out in the President's Investment Policy Statement of September 9, 1983.

The Basic Rules

The Agreement sets out four basic rules to govern the treatment of investors from each country:

National Treatment and Non-discrimination: Each party is to treat investors of the other party at least as favorably as its own investors (in like circumstances) with respect to the establishment of new businesses and the acquisition of existing business, and with respect to the conduct, operation and sale of business enterprises located in its territory. Neither party, thus, can require that investors sell investments by reason of their nationality, or that their own nationals must hold a minimum level of equity in investments made by investors of the other country.

Elimination of Performance Requirements: Neither party, when permitting an investment in its territory, or when regulating an investment, may impose or enforce trade-distorting measures which require an investor to export a certain amount of goods, or substitute locally produced goods for imports, or buy or give a preference to locally produced goods. (This rule also applies to third country investors when such measures could significantly affect U.S.-Canadian trade.)

Expropriation Only in Accordance with International Law Standards: Neither party may directly or indirectly expropriate the holding of an investor from the other country except in accordance with generally accepted international law standards which, inter alia, require payment of prompt, adequate and effective compensation at the fair market value of the expropriated properties.

Free Transfer: Neither party may prevent an investor from transferring profits, earnings from an investment, or sales and liquidation proceeds (with only limited exceptions relating, for example, to limitations on dividend payments set by bankruptcy laws.)

Exceptions

Certain measures are excluded, notably those involving transportation services. The provision of financial services (except certain insurance measures) are covered elsewhere in the Agreement.

In general, existing measures are grandfathered, such as the existing U.S. laws restricting foreign investment in such fields as atomic energy and communications and the Canadian laws restricting foreign investment in communications. Those measures may not be made more restrictive.

The oil and gas and uranium mining industries were subject to published policies under the Investment Canada Act prior to October 3, 1987; the application of these policies and of the thresholds of the Agreement to these industries is to be clarified by an exchange of letters.

Liberalization of Entry and Exit Restrictions

The Agreement does achieve major liberalization of Canada's Investment Canada Act, which is Canada's principal mechanism for regulating investment into Canada and, a fortiori, sales of Canadian businesses to foreign investors.

Canada's threshold for review of direct acquisitions by U.S. investors is raised to C$150 million (in constant 1992 Canadian dollars) after three years from the date of entry into force of the FTA.

Canada will no longer review indirect acquisitions after the end of that three-year period.

Canada also will apply these higher thresholds to an acquisition by a foreign investor when a U.S. investor seeks to sell its Canadian business.

Canada will offer to buy, at a fair open market price (determined by independent assessment) any business enterprise in Canada in the cultural industry which Canada requires be divested when reviewing an indirect acquisition. If, for example, a U.S. firm seeks to buy another U.S. firm with a Canadian subsidiary in a cultural industry, Canada may require the new owner to divest the cultural subsidiary to a Canadian purchaser. (The FTA exempts cultural industries generally from the Agreement, and therefore from the Chapter.)

Canada will no longer impose certain trade-distorting performance requirements under the Investment Canada Act. These are requirements to export, substitute local production for imports, source or purchase locally, or achieve specified domestic content.

PART FIVE: FINANCIAL SERVICES

Chapter Seventeen: Financial Services

This is the first U.S. bilateral agreement covering the entire financial sector. It removes essentially all existing discrimination faced by U.S. financial institutions operating in Canada, allows the flexibility to acquire Canadian financial services firms, improves access between our markets, and allows financial firms on both sides of the border to compete on a more equal basis. Canadian financial institutions will continue to enjoy the current treatment and open access they now receive in the U.S. financial market.

The Agreement covers all current and future laws, regulations, and practices relating to financial institutions in both countries. Financial institutions include commercial banks, investment banks, trust and loan companies, savings-and-loan institutions, certain activities of insurance companies, and other institutions so designated under the laws of each country. (Financial services offered by nonfinancial institutions and insurance services are covered elsewhere in the Agreement.)

The domestic assets of foreign bank subsidiaries operating in Canada (the "closely held" or Schedule B banks) are currently limited to 16 percent of all domestic assets of the Canadian banking system. Foreign bank subsidiaries also face individual capital limits and other restraints such as the sale of loans to the parent bank. Under this agreement, U.S. commercial bank subsidiaries will be exempt from the current restrictions on market share, asset growth, and capital expansion, in the same way that Canadian banks are free from these restraints. U.S. commercial banks will also be allowed to establish or acquire securities firms or federally-regulated Canadian insurance and trust companies, again in the same manner as Canadian banks.

Under the current proposals for financial market reform in Canada, foreign insurance companies have perhaps been the most disadvantaged because of the so-called "10/25" rule. This prevents a nonresident from acquiring more than 10 percent ownership of a Canadian insurance company, or trust and loan company; total nonresident ownership is limited to 25 percent. Under the

Agreement, U.S. insurance firms will now receive the same rights as Canadian insurance companies to diversify in the financial sector by establishing or acquiring federally-regulated insurance companies, trust companies, Schedule B banks, or securities firms.

While Ontario, Quebec, and other provinces have liberalized their securities markets and opened them to foreign investors, the federal government implemented a policy of reciprocity which has held up the applications for entry by U.S. securities firms and banks. Under the Agreement, these applications will be reviewed on a prudential basis, just as for Canadian firms, rather than on a reciprocity basis. U.S. securities firms established in Canada will have the ability to diversify through a holding company structure into other financial activities such as banking and insurance.

Under the Agreement, the U.S. also made a number of specific commitments, although there were no national treatment barriers in the United States to eliminate. The U.S. agreed to guarantee the right of Canadian banks to retain their multi-state branches that were grandfathered under the International Banking Act of 1978. If the Glass-Steagall Act, which separates commercial and investment banking in the U.S., is amended, the U.S. will extend these benefits to Canadian financial institutions in the U.S. Such guarantees have never before been extended to any other country.

The U.S. responded to Canadian concerns regarding the treatment of their banks and securities firms which merge in Canada, but have operations in the U.S., by agreeing to allow Canadian banks (as well as U.S. and other foreign banks) in the U.S. to underwrite and deal in debt obligations fully backed by Canada or its political subdivisions. This is a new power that is consistent with the existing ability of banks to underwrite and deal in securities of the U.S. Government and its political subdivisions, yet does not undermine the basic tenets of the Glass-Steagall Act.

The new power enables Canadian firms to take advantage of liberalization in Canada, while retaining the most important securities activities in the U.S. One of the side effects of this new power will be a direct benefit to the Canadian federal government, the Agent Crown corporations, the provincial governments, and the municipal governments in Canada. Since, as a result of the agreement, their debt will be underwritten and traded by more firms in the U.S., it offers the potential for a wider, deeper market and, therefore, lower borrowing costs.

In addition to these specific commitments, both the U.S. and Canada have made general commitments. The U.S. has agreed to continue the current treatment provided to Canadian financial institutions established in the U.S. as long as Canada continues to liberalize its financial markets and to extend the benefits to U.S. financial institutions established in Canada. Canada has made an analogous commitment. The Agreement establishes a formal consultative mechanism between the U.S. Department of the Treasury and the Canadian Department of Finance to oversee this liberalization and deal with any other financial services issues.

PART SIX: INSTITUTIONAL PROVISIONS

This part establishes procedures for general dispute settlement and the special arrangements for antidumping and countervailing duties.

Chapter Eighteen: Institutional Provisions

The Agreement provides for a consultative mechanism to avoid disputes and resolve any disagreements quickly and easily, with provisions for use of binational panels of independent experts for unresolved disputes.

The Canada-United States Trade Commission is established to supervise the implementation of the Agreement and to resolve disputes on all matters except financial services, antidumping and countervailing duties. The Commission will be composed of Cabinet-level representatives of both governments and will operate by consensus.

Either government may request consultations and will attempt to avoid or resolve disputes through consultations. If consultations are unsuccessful, either government may request a meeting of the Commission. The Commission may use a mediator or draw on expert advice in seeking a bilateral settlement. If not resolved in this manner, the Commission may agree to refer the matter to binding arbitration or a panel can be established at the request of either party.

A panel will be appointed from a roster maintained by the Commission. Two panelists will be appointed by each government and a fifth, the chairman, will be jointly agreed, selected by the other four, or chosen by lot. The panel, after hearing the arguments of both sides, will report its findings and recommendations to the Commission. If either side believes the panel has erred, it may present written objections to the panel, which may reconsider and revise its final report.

After receiving the panel's final report, the Commission will agree on the resolution of the dispute, whenever possible removing the nonconforming measure rather than paying compensation. If the Commission cannot agree and a government believes its fundamental rights or benefits under the FTA are being impaired, that government may withdraw equivalent benefits from the other.

Chapter Nineteen: Binational Dispute Settlement in Antidumping and Countervailing Duty Cases:

The U.S.and Canada will continue to apply their own national antidumping (AD) and countervailing duty (CVD) laws to goods imported from the other country. In such cases, independent binational panels acting in place of national courts will expeditiously review final AD and CVD determinations to decide whether they are consistent with the AD or CVD law of the country that made the determination.

The panel procedure -- combining independent review and judicial standards with an FTA-created forum and a tight schedule -- will allow quick resolution of AD/CVD issues between the two countries without unnecessary bilateral trade friction, yet preserve the rights of injured companies to obtain relief from unfair trade practices. The panel mechanism will remain in place for up to seven years, while a bilateral working group attempts to develop new approaches to unfair pricing and government subsidies that would ensure effective discipline over unfair trade practices and minimize unfair trade disputes within the new free trade area.

Under the FTA's panel procedure, independent binational panels will review final AD and CVD determinations by the relevant administrative agencies of the U.S. and Canada. In one FTA country's AD or CVD case involving a product from the other FTA country, panels would substitute for national courts unless, in a particular case, no party preferred panel to court review. Panel decisions would be binding as a matter of international law with respect to the particular matter reviewed. This system of review would apply to final determinations made by an administrative agency after the date of entry into force of the Agreement. It will not affect either country's judicial review of AD/CVD cases concerning imports from third countries.

In the U.S., the Department of Commerce makes final dumping or subsidy determinations in AD/CVD investigations and reviews of AD/CVD orders, and the U.S. International Trade Commission makes final determinations in AD/CVD investigations as to whether a U.S. industry has been injured. These determinations in a U.S. case involving goods from Canada, and Canada's parallel determinations in a Canadian case involving goods from the U.S., will be subject to panel review. This symmetry in the panel review process will enhance the rights of U.S. producers and exporters, since judicial review of some Canadian dumping and subsidy findings is not now available.

The panels will review final AD/CVD determinations solely to determine, based on the administrative record, whether the relevant administrative agency applied its national AD/CVD law correctly. The panels will employ the same standard of review and the same general legal principles as would a domestic court. If a panel finds that the administrative agency applied the law correctly, it will affirm the determination. Otherwise, it will send the case back for a corrected determination.

Although formally only the two governments may invoke the panel review process, the governments will automatically trigger panel review at the request of any person who otherwise could have challenged the determination in court. Parties to the case or their lawyers will argue their positions before the panel, as they would before a court. Sensitive business information will be protected against unlawful disclosure in the panel review process.

Panelists will generally be selected from a roster to be developed by the two governments. Individuals on the roster will be U.S. or Canadian citizens chosen for objectivity, reliability, sound judgment, and general familiarity with international trade law. To ensure impartiality, roster members, with the exception of judges, may not be government officials. Individual panels will have five members, the U.S. and Canada each appointing two. The fifth panelist will be chosen by agreement between the two governments, among the four panelists, or by lot from the roster. Because panels will be performing a judicial-like function, a majority of the panelists including the chairman must be attorneys.

The two governments expect the panel system to work smoothly and effectively. As a safeguard against an impropriety or gross panel error that could threaten the integrity of the process, however, the FTA provides for an "extraordinary challenge procedure." In carefully defined circumstances, either government could appeal a panel's decision to a three-member committee of U.S. and Canadian judges or former judges. The committee would make a prompt decision to affirm, vacate, or remand the panel's decision.

The Agreement also establishes a procedure for advisory panel review of amendments to U.S. or Canadian AD or CVD laws enacted after the FTA enters into force. The two governments will consult about any proposed AD/CVD amendments applicable to the other country's goods. If one country changes its AD or CVD statutes, the other government may request that a panel be established to give an advisory opinion on whether the amendment is consistent with the GATT and the FTA.

If the panel views the amendment as inconsistent with the GATT or the Agreement and recommends modifications to eliminate the inconsistency, the two governments will consult to reach a solution, which could include seeking remedial legislation. If no agreement is reached or remedial legislation agreed on is not enacted, the complaining government may enact a comparable amendment to its AD/CVD law or terminate the Agreement upon 60 days' written notice.

PART SEVEN: OTHER PROVISIONS

Chapter Twenty: Other Provisions

Provisions which did not fall logically into other chapters appear here. Included are some particular sectoral issues, as well as some general rules affecting the overall Agreement.

Softwood Lumber

The 1986 Memorandum of Understanding (MOU) on Softwood Lumber is grandfathered. The MOU resolved a countervailing duty case brought by the U.S. softwood lumber industry against Canada's lumber exports. Canada agreed to apply a 15 percent export tax on lumber until such time as the provincial stumpage pricing practices were altered.

Plywood

Canada will decide by March 15, 1988 whether to allow the use of U.S. standard C-D grade plywood in housing it finances. If so, U.S. tariff concessions on plywood and particleboard will begin to be implemented on January 1, 1989. If not, a panel of experts will examine the issue and the governments will consult on how to implement the tariff concessions.

Culture

It has been the policy of Canadian governments to promote cultural activities with the goal of fostering Canada's unique cultural heritage. Some of these measures have had trade effects and an adverse impact on U.S. commercial interests.

The U.S. recognizes the importance to Canada of maintaining its cultural identity. At the same time, however, the U.S. wants to ensure that Canadian cultural policies do not constitute a discriminatory and unnecessary barrier to U.S. trade.

Certain "cultural industries" are exempt from the provisions of the FTA. This allows either country to maintain programs that would otherwise be inconsistent with the Agreement. However, the other country retains the right to retaliate with measures of equivalent commercial effect whenever the cultural exemption hurts that country's commercial interests. The right to take countermeasures is not subject to prior invocation of the Agreement's dispute settlement provisions.

Cultural activities exempted from the FTA include the publication, sale, distribution or exhibition of: books, magazines, and newspapers; film and video recordings; audio or video music recordings; and also radio, television and cable dissemination. Of course, tariffs will be eliminated on all these products.

In addition, Canada has agreed to alter a number of practices that discriminate against U.S. businesses. These new steps include elimination of a print-in-Canada requirement for tax benefits and increased copyright protection for the retransmission of commercial broadcasts.

Other Provisions

The two governments agreed that if either takes trade actions to counteract a serious deterioration in its balance-of-payments position, it will do so consistent with its rights and obligations under the GATT, the International Monetary Fund and the Organization for Economic Cooperation and Development.

The precedence of the 1980 tax convention is stated because the Agreement takes precedence over other agreements unless specified.

The standard GATT national security disclaimer is adopted, except for energy and government procurement. For energy, there is a more limited national security provision specified in the energy chapter. For government procurement, the GATT Government Procurement Code provision is adopted.

The establishment of government monopolies is expressly permitted, but it must be done in a way that does not violate the principles of the Agreement.

The Agreement states that if measures not expressly prohibited are deemed nevertheless to nullify or impair benefits reasonably expected under the Agreement, dispute settlement can be invoked.

PART EIGHT: FINAL PROVISIONS

Chapter Twenty-One: Final Provisions

The two governments agree to exchange necessary statistical information and to publish information to facilitate implementation of the Agreement. The Agreement will become effective January 1, 1989. It can be amended by mutual agreement and can be terminated by either party with six months' notice.

For Further Information, Contact:

	Area Code 202
The Office of the U.S. Trade Representative	
Office of Canada	395-5663
Office of Public Affairs	395-3230
Department of Commerce	
Office of Canada	377-3101
Office of Public Affairs	377-3808
Department of Agriculture	
Office of International Trade Policy	382-1338
Office of the Press Secretary	447-4623
Department of the Treasury	
Office of International Trade	566-8107
Office of International Investment	566-5811
Canada Desk (Financial Services)	566-2747
Department of State	
Bureau of Economic and Business Affairs	
Office of Trade	647-1718
Office of Public Affairs	647-1942
Bureau of European and Canadian Affairs	
Office of Canadian Affairs	647-1097
Department of Labor	
Office of International Economic Affairs	523-6096
Office of Public Affairs	523-9711
Department of Energy	
Office of Int'l Affairs and Energy Emergencies	586-5800

ACTE/CAN MEMBERS
as of February 1, 1988

ABC Custom Cedar Homes, Inc.	Sonoma, CA
ADC Telecommunications	Bloomington, MN
AT&T	New York, NY
A-C Brake Co., Inc.	Louisville, KY
A.T. Cross Company	Lincoln, RI
ALCOA	Pittsburgh, PA
AMCA International Corporation	Hanover, NH
Aaonton Group, Inc.	Plano, TX
Action Associates	Bloomington, MN
Aerospace Industries Association of America, Inc.	Washington, DC
Air Conditioning and Refrigeration Institute	Arlington, VA
Air Conditioning Contractors of America	Washington, DC
Alaska Quality Control & Technical Services, Ltd.	Anchorage, AK
Albert Seisler Machine Corp.	Mohnton, PA
Alderfer & Herm	Denver, CO
Allied-Signal International, Inc.	Morristown, NJ
Allis - Chalmers Corporation	West Allis, WI
Almerica Overseas, Inc.	Destin, FL
Alpha Research, Inc.	Glendale, WI
Alumax, Inc.	San Mateo, CA
Amatos, Inc.	Middletown, CT
Ambler Organizational Consultants, Inc.	Cherry Hill, NJ
Amerace Corporation	Hackettstown, NJ
Amerex Corporation	Trussville, AL
American Association of Exporters & Importers	New York, NY
American Association of Meat Processors	Elizabethtown, PA
American Business Conference	Washington, DC
American Cast Metals Association	Des Plaines, IL
American Council of Independent Laboratories	Washington, DC
American Electronics Association	Washington, DC
American Express Company	New York, NY
American Federation of Small Business	Chicago, IL
American Frozen Food Institute	McLean, VA
American Furniture Manufacturers Association	Washington, DC
American Gas Association	Arlington, VA
American Institute of Marine Underwriters	New York, NY
American Institute of Small Business	Minneapolis, MN
American Newspaper Publishers Association	Washington, DC
American Retail Federation	Washington, DC
American Street Corridor Business Association	Philadelphia, PA
American Trucking Association	Alexandria, VA
Amigo Sales, Inc.	Bridgeport, MI
Amoco Corporation	Chicago, IL
Archer Daniels Midland	Decatur, IL
Armtek Corporation	New Haven, CT
Arthur Andersen & Company	Chicago, IL
Arthur Young	Dallas, TX

Artmor Plastics Corporation	Cumberland, MD
Associated Builders & Contractors	Washington, DC
Associated Lumber Industries, Inc.	Carbondale, IL
Association of Collegiate Entrepreneurs	Wichita, KS
Atlantic Council Canada Group	Washington, DC
Augat, Inc.	Mansfield, MA
Austad's	Sioux Falls, SD
Avon Products, Inc.	New York, NY
B.F. Goodrich Company	Akron, OH
BP America, Inc.	Cleveland, OH
Babcock & Wilcox, Company	New Orleans, LA
Baker Service Tools	Houston, TX
Baldor Electric Company	Fort Smith, AR
Ball Corporation	Muncie, IN
Ball Publishing Company	Arcanum, OH
Bank of America	San Francisco, CA
Barnes Group, Inc.	Bristol, CT
Barrett Trailers, Inc.	Oklahoma City, OK
Barrios Technology, Inc.	Houston, TX
Barrister Information Systems Corporation	Buffalo, NY
Bearings, Inc.	Cleveland, OH
Beckman Instruments, Inc.	Fullerton, CA
Bemis Manufacturing Company	Sheboygan Falls, WI
Bend Photo Center, Inc.	Bend, OR
Bernard R. Horn Company	Folcroft, PA
Better Business Bureau of Maricopa County	Mesa, AZ
Blair Cartage, Inc.	Newbury, OH
Blatt's Bakery	Put-in-Bay, OH
Boeing Company	Seattle, WA
Bowes Manufacturing, Inc.	Solon, OH
Bristol-Myers Company	New York, NY
Brodart Company	Williamsport, PA
Brooklyn Union Gas Company	Brooklyn, NY
Brown Capital Management, Inc.	Baltimore, MD
Brown Deer Bank	Brown Deer, WI
Brown-Forman Corporation	Louisville, KY
Buffalo Forge Co.	Buffalo, NY
CPC International, Inc.	Englewood Cliffs, NJ
Carbis Walker & Associates	Butler, PA
Cargill, Incorporated	Minneapolis, MN
Carolina Freight Carriers Corporation	Cherryville, NC
Cass County Abstract Company	Fargo, ND
Castite Systems, Inc.	Cleveland, OH
Caterpillar, Inc.	Peoria, IL
Champion International Corporation	Stamford, CT
Charles Beck Machine Corporation	King of Prussia, PA
Charles F. McAfee Architects Engineer Planners	Wichita, KS
Charter Medical Corporation	Macon, GA
Chattahoochee Business Group	Marietta, GA
Chicago Barter Corporation	Lombard, IL
Chicone Groves	Orlando, FL
Christy's	Ellwood City, PA
Chrysler Corporation	Highland Park, MI
Citicorp	New York, NY

Citizens for a Sound Economy	Washington, DC
Clark Seals, Ltd.	Tulsa, OK
Claseman Management Services	St. Paul, MN
Climatic Control Company, Inc.	Milwaukee, WI
Coalition of Service Industries, Inc.	Washington, DC
Coca Cola, Co.	Washington, DC
Colborn's	Billings, MT
Coleco Industries, Inc.	West Hartford, CT
Columbia Chocolates By Mordens	Astoria, OR
Comdisco, Inc.	Rosemont, IL
Commercial Design Consultants	Milwaukee, WI
Committee for Small Business Exports	Aspen, CO
Comp-U-Card International, Inc.	Stamford, CT
Competition Cams, Inc.	Memphis, TN
Competitive Enterprise Institute	Washington, DC
Computer & Business Equipment Manufacturers Association	Washington, DC
Computer & Communications Industry Association	Washington, DC
Conco Systems, Inc.	Verona, PA
Concord Engineering, Inc.	Richmond, CA
Concord, Inc.	Fargo, ND
Consolidated Freightways, Inc.	Menlo Park,CA
Contact Systems Corporation	New York, NY
Control Data Corporation	Minneapolis, MN
Cooper Industries, Inc.	Houston, TX
Coopers & Lybrand	New York, NY
Copyright Clearance Center	Salem, MA
Creative Management Concepts	Reading, PA
Curtin Insurance Agency, Inc.	Cambridge, MA
Curtis Circulation Company	Hackensack, NJ
Custom Engineering, Inc.	Englewood, CO
D&M Consulting & Brokerage, Inc.	Marshfield, WI
D-M-E Company	Madison Heights, MI
Dawg Luvers & Co.	Jesup, GA
Deering Lumber, Inc.	Biddeford, MA
Design & Manufacturing Corporation	Connersville, IN
Di-Rec Services	Dallas, TX
Distilled Spirits Council of the U.S., Inc	Washington, DC
Dollar Power Discount Store	San Francisco, CA
Dolphin Photo Center, Inc.	Bend, OR
Donaldson Company, Inc.	Minneapolis, MN
Dow Chemical, U.S.A.	Midland, MI
Dow Corning Corporation	Midland, MI
Dunkin' Donuts Incorporated	Randolph, MA
E. H. Curtin Insurance Agency	Cambridge, MA
E. I. du Pont de Nemours & Co.	Wilmington, DE
E. J. Kearney & Company	Portland, ME
E. R. Clarke Associates, Inc.	Lake Forest, IL
Eastern Building Material Dealers Assoc.	Media, PA
Eastman Kodak Company	Rochester, NY
ERA Steel Construction Corp.	White Plains, NY
Echlin Corp.	Branford, CT
Eclipse, Inc.	Rockford, IL
Econocorp, Inc.	Randolph, MA

Elbert Bradshaw Enterprises	Carmel, IN
Electro Rent Corporation	Santa Monica, CA
Emergency Committee for American Trade	Washington, DC
Enerco Technical Products, Inc.	Cleveland, OH
Ernst & Whinney	New York, NY
Ernst & Whinney International	New York, NY
Esselte Business Systems, Inc.	Garden City, NY
Event Specialists, Inc.	Anchorage, AK
Executive Report	Pittsburgh, PA
FMC Corporation	Chicago, IL
Fairchild Industries	Chantilly, VA
Fila Associates	Miami, FL
First Bank System	Minneapolis, MN
Flambeau Corporation	Baraboo, WI
Fleetwood Enterprises, Inc.	Riverside,CA
Flint Industrial Services	Albany, GA
Focus Electronics, Inc.	Brooklyn, NY
Ford Motor Company	Dearborn, MI
Fort Howard Paper Company	Green Bay, WI
Fraser Paper, Limited	Madawaska, ME
Fred Jones Manufacturing Company	Oklahoma City, OK
Fuqua Industries, Inc.	Atlanta, GA
G.D. Searle & Co.	Chicago, IL
Garrett Corporation	Torrance, CA
Gates Lear Jet Corporation	Tucson, AZ
Gatherings South, Inc.	Greenville, SC
Gene Boyer & Associates, Inc.	Beaver Dam, WI
Genentech, Inc.	S. San Francisco, C
General Dynamics Corporation	St. Louis, MO
General Electric Company	Fairfield, CT
General Public Utilities Corporation	Parsippany, NJ
Gerber Industries, Inc.	St. Peters, MO
Glowacki Everhardt & Association, Inc.	Toledo, OH
Goldman Sachs	New York, NY
Goodyear Tire & Rubber Company	Akron, OH
Gorman-Rupp Co.	Waterbury, CT
Grand Trunk Western	Detroit, MI
Greater Newark Chamber of Commerce	Newark, NJ
Gregory Manufacturing Co., Inc.	Jackson, MS
Griffin Agency	Prospect, PA
Grit Publishing Company	Williamsport, PA
Grumman Corporation	Bethpage, NY
HMA International Business Development, Ltd.	Greensboro, NC
Half Price Books, Inc.	Dallas, TX
Hamilton Beach, Inc.	Waterbury, CT
Heat - Timer Corporation	Fairfield, NJ
Helene Curtis Industries	Chicago, IL
Hercules Engines, Inc.	Canton, OH
Herrmidifier Company, Inc.	Lancaster, PA
Hevi-Haul International Limited	Butler, WI
Hexagon Architecture Group Limited	Wyncote, PA
High-Tech International	Beltsville, MD
Hill & Associates	Madison, WI
Hoffman Air & Filtration Systems	East Syracuse, NY

Holiday Corporation	Memphis, TN
Holloman Child Development Centers	Hampton, VA
Honeywell, Inc.	Minneapolis, MN
Horizon Resources Corporation	York, PA
Hotwatt, Inc.	Danvers, MA
Hunt Tractor, Inc.	Louisville, KY
ITBR, Inc.	Austin, TX
Illinois Lumber & Material Dealers Assoc.	Springfield, IL
Illinois Small Businessmen's Assoc.	Chicago, IL
Image Express	Southfield, MI
Imperial Schrade Corporation	New York, NY
Impressive Advance & Litho, Inc.	Waynesboro, VA
Incom International, Inc.	Pittsburgh, PA
Independent Bakers Association	Washington, DC
Industrial Commission of Arizona	Mesa, AZ
Industrial Heating Equipment Association	Arlington, VA
Informerific/Hexter & Associates	Cleveland, OH
Intel Corporation	Santa Clara, CA
International Business Aviation Council, Ltd.	Washington, DC
International Business Machines Corp.	Armonk, NY
International Data Corporation	McLean, VA
International Franchise Association	Washington, DC
Interstate Electronics Corporation	Anaheim, CA
JGP Marketing Group International, Inc.	Livonia, MI
JLG Industries, Inc.	McConnellsburg, PA
Jack O'Connor's Quality Beef 'N Seafood	Bridgewater, NJ
Johnson & Higgins	New York, NY
Johnson & Johnson	New Brunswick, NJ
Jon Holtshopple & Associates	Madison, WI
Judith E. Meador	St. Louis, MI
Justin Boot Company	Fort Worth, TX
Katy Industries, Inc.	Elgin, IL
Kentucky Manufacturing Co.	Louisville, KY
Kerr-Hays Co.	Ligonier, PA
Kimball Physics, Inc.	Wilton, NH
Kingsbury Machine Tool Corporation	Keene, NH
Knape & Vogt Manufacturing Company	Grand Rapids, MI
Knoll International Holdings, Inc.	New York, NY
Koch Industries	Wichita, KS
Koester Corporation	Defiance, OH
L.R. Nelson Corporation	Peoria, VA
LC Technologies, Inc.	Fairfax, VA
Lafarge Corporation	Dallas, TX
Lamanite Enterprises Corp.	Clearfield, UT
Lancaster Laboratories, Inc.	Lancaster, PA
Laramy Products Co.	Lyndonville, VT
Lavelle Aircraft Co.	Philadelphia, PA
Lee, Theisen & Stegall	Phoenix, AZ
Lennox Industries Inc.	Dallas, TX
Lewis Ranches	Portland, OR
Lin-Art, Ltd.	Arlington Heights, IL
Litton Industries	Woodland Hills, CA
Longyear Company	Minneapolis, MN
Louisiana Association of Business and Industry	Baton Rouge, LA

Louisiana Retailers Association	Baton Rouge, LA
Louisville Plate Glass Company	Louisville, KY
Lowe's Companies, Inc.	North Wilkesboro, NC
Luken's General Industries, Inc.	St. Louis, MO
Luken's Inc.	Coatesville, PA
Lumbermen Associates, Inc.	Philadelphia, PA
M. Brown & Sons, Inc.	Bremen, IN
M. S. Hansson, Inc.	Boulder, CO
MDB, Inc.	Pittsburgh, PA
Mack Trucks Inc.	Allentown, PA
Macmillan, Inc.	New York, NY
Maidenform, Inc.	New York, NY
Maine Machine Products Company	South Paris, ME
Maine Wild Blueberry Company	Machias, ME
Manufactured Buildings Components, Corp.	East Lansing, MO
Marco Wood Products	Walled Lake, MI
Margaret Coleman Associates	Hinsdale, IL
Marketing Communications Systems	Portland, OR
Markets Abroad, Inc.	Miami, FL
Marriott Corporation	Washington, DC
Marsh & McLennan, Inc.	New York, NY
Marshall & Associates	Topsfield, MA
Mary Kay Cosmetics	Dallas, TX
Mattel, Inc.	Hawthorne, CA
Mayflower Transit, Inc.	Indianapolis, IN
Maytag Corporation	Newton, IA
McIntosh, Inc.	Norfolk, NE
McLaurin Parking Co.	Raleigh, NC
McMinnville City Sanitary Service, Inc.	McMinnville, OR
Measurex Corporation	Cupertino, CA
Mel Boldt & Association	Mt. Prospect, IL
Mentholatum Company	Buffalo, NY
Merck & Co., Inc.	Rahway, NJ
Metal Treating Institute	Jacksonville Beach,FL
Metropolitan Life Insurance Company	New York, NY
Mid-Continent Cold Storage Co.	Omaha, NE
Milbar Corporation	Chargin Falls, OH
Miller Picking Corporation	Johnsontown, PA.
Minnesota Mining & Manufacturing Company (3M)	St. Paul, MN
Mobil Oil Corporation	New York, NY
MonArk Boat Company	Monticello, AR
Morgan Guarantee	New York, NY
Morton Buildings, Inc.	Morton, IL
Mosbacher Energy Company	Houston, TX
Mosler International	Hamilton, OH
Murphy Oil Corporation	El Dorado, AR
N. J. Chapter - National Association of Women Business Owners	Cherry Hill, NJ
NVRyan	Alexandria, VA
Nalco Chemical Company	Naperville, IL
National American Wholesale Grocers Association	Falls Church, VA
National Association of Beverage Importers, Inc.	Washington, DC
National Association of Home Builders	Washington, DC

National Association of Manufacturers	Washington, DC
National Association of Photographic Manufacturers	Harrison, NY
National Association of Printing Ink Manufacturers	Harrison, NY
National Association of Women Business Owners	Chicago, IL
National Federation of Independent Business	Washington, DC
National Foreign Trade Council	New York, NY
National Frame Builders Association	Kansas, City, MO
National Gypsum Company	Dallas, TX
National Hispanic Business Association	Chamblee, GA
National Lumber & Building Materials Dealers Association	Washington, DC
National Machine Tool Builders Association	McLean, VA
National Retail Merchants Association	Washington, DC
National Small Business United	Washington, DC
National-American Wholesalers Grocers' Association	Washington, DC
Nestle Enterprises, Inc.	Solon, OH
New Jersey Small Business Unity Council	Little Silver, NJ
Newlyweds Foods, Inc.	Chicago, IL
Nicholson, Inc.	Helena, MT
North Haven Gardens	Dallas, TX
Northeastern Retail Lumbermen's Association	Rochester, NY
Northland Corporation	Greenville, MI
Northwest River Supplies, Inc.	Moscow, ID
O'Brien Communications	Del Mar, CA
Oakes & McClelland Company	Greenville, PA
Oakwood Markets, Inc.	Kingsport, TN
Occidental Chemical Corp.	Dallas, TX
Occidental Petroleum Corporation	Los Angeles, CA
Ogilvy & Mather	WAshington, DC
Oneida Ltd.	Oneida, NY
PC Etcetera	New York, NY
PII Affiliates, Ltd.	Manchester, PA
PLM Companies, Inc.	San Francisco, CA
PMI/Taylor Advertising	Columbus, OH
Pacer Systems, Inc.	Billerica, MA
Pacific Interstate Company	Los Angeles, CA
Pacific Northwest International Trade Association	Seattle, WA
Paragon Electric Company, Inc	Two Rivers, WI
Parlette Tire Co., Inc.	Erie, PA
Peat Marwick Main & Co.	New York, NY
Pennwalt Corporation	Philadelphia, PA
People to People Associates	Lexington, MA
Pepsi-Cola International	Somers, NY
Perham Egg, Inc.	Perham, MN
Perlis Truckstops	Cordele, GA
Pet Incorporated	St. Louis, MO
Pharmaceutical Manufacturers Association	Washington, D.C.
Philips Industries, Inc.	Dayton, OH
Picken Parts, Inc.	Fresno, CA

Pillsbury Company	Minneapolis, MN
Plabell Rubber Products, Inc.	Toledo, OH
Plasma Energy Corp.	Raleigh, NC
Plasco, Inc.	Woburn, MA
Ply*Gem Industries, Inc.	New York, NY
Polaris Industries, Inc.	Minneapolis, MN
Polaroid Corporation	Cambridge, MA
Powermax, Inc.	Columbus, OH
Pratt & Lambert	Buffalo, NY
Pre-Paid Legal Services	Ada, OK
Precision Twist Drill Co.	Crystal Lake, IL
Prinova Co., Inc.	San Francisco, CA
Printing Industries of America	Arlington, VA
Procter & Gamble	Cincinnati, OH
Product Development Corporation	Little Rock, AR
Professional Service Corporation	Green Bay, WI
Professional Wealth Management, Inc.	Asheville, NC
Professional Women in Construction & Allied Industries	White Plains, NY
Progressive Management Enterprises, Ltd.	St. Louis, MO
Pulp & Paper Machinery Manufacturers' Association	Washington, DC
Queen Carpet Corporation	Dalton, GA
Queen City Industries, Inc.	Piqua, OH
Quick, Finan & Associates, Inc.	Washington, DC
Quill Corporation	Lincolnshire, IL
R. R. Accessories, Inc.	Boston, MA
R. R. Donnelley & Sons Company	Chicago, IL
RJR Nabisco	Winston-Salem, NC
Radio KDNO	Delano, CA
Ramada, Inc.	Phoenix, AZ
Recognition Equipment, Inc.	Dallas, TX
Recon/Optical, Inc.	Barrington, IL
Rexnard, Inc.	Brookfield, WI
Rheem Manufacturing Company	New York, NY
Ridenour & Associates	Chicago, IL
Riordan, Crivello, Carlson & Menthkowski	Milwaukee, WI
Roll-o-Matic, Inc.	Kansas City, MO
Rooney, Plotkin & Willey	Providence, RI
Rorer International Pharmaceuticals	Fort Washington, PA
Rotron Engineering Company, Inc.	Woburn, MA
Rudolph Beaver, Inc.	Waltham, MA
Rural Gravuce Services, Inc.	Madison, WI
Russ Berrie and Company, Inc.	Oakland, NJ
S. C. Johnson & Son, Inc.	Racine, WI
SNC Manufacturing Company	Oshkosh, WI
Sabre Yachts	South Casco, ME
Safeway Stores, Inc.	Oakland, CA
Samsonite Corporation	Denver, CO
Sandmeyer Steel Company	Philadelphia, PA
Sargent-Welch Scientific Company	Skokie, IL
Scientific-Atlanta, Inc.	Atlanta, GA
Scott Paper Company	Philadelphia, PA
Sears, Roebuck and Company	Chicago, IL

Shaw Mudge & Company	Stamford, CT
Shell Oil Company	Houston, TX
Sheridan & Fritz, P.C.	Harrisburg, PA
Siliconix Inc.	Santa Clara, CA
Simplex Time Recorder Company	Gardner, MA
Singer, Lewak, Greenbaum & Goldstein	Los Angeles, CA
Smada, Inc.	Phoenix, AZ
Small Business Foundation of America	Boston, MA
Small Business Hawaii, Inc.	Honolulu, HI
Small Business United of Missouri	St. Louis, MO
Smaller Business Associates of New England	Boston, MA
Smaller Manufacturers Council	Pittsburgh, PA
Smith Barney, Harris, Upham & Co., Inc.	New York, NY
Smith Rollinson	Alexandria, VA
Snyder General Corporation	Dallas, TX
Southern Connecticut Gas Company	Bridgeport, CT
Spacesaver Corporation	Fort Atkinson, WI
Specialized Carriers & Rigging Association	Alexandria, VA
Square One, Inc.	Madison, WI
Squibb Corporation	Princeton, NJ
Sta-Rite Overseas Corporation	Milwaukee, WI
Standard-Thomson Corporation	Waltham, MA
Standard Oil	Washington, DC
Stemco, Inc. Truck Products	Longview, TX
Steiner Shipyard, Inc.	Bayou La Batre, AL
Stiegler, Inc.	Fargo, ND
Stone & Webster Engineering Corporation	Boston, MA
Storage Technology Corporation	Louisville, CO
Stripling-Blake Building Lumber Co., Inc	Austin, TX
Sun Electric Corporation	Crystal Lake, IL
Superior Technical Ceramics Corp.	St. Albans, VT
Syntex Corporation	Palo Alto, CA
T&H Building Supply	Redwood City, CA
TAPJAC Home Centers	Carthage, MO
TRW, Inc.	Cleveland, OH
TVI Creative Specialists	Washington, DC
TXI Industries	Dallas, TX
Tandem Computers Incorporated	Cupertino, CA
Tandy Brands, Inc.	Fort Worth, TX
Tanner Systems, Inc.	Sauk Rapids, MN
Tatum Enterprises	Honolulu, HI
Technivest, Inc.	South Bend, IN
Ted Grob Sales, Inc.	Grafton, WI
Tenneco Gas Pipeline Group	Houston, TX
Termiflex Corporation	Merrimack, NH
Terry Neese Personnel Services	Oklahoma City, OK
Texas Industries, Inc.	Dallas, TX
The Afro/Hispanic-American Chambers of Commerce	Bossier City, LA
The Americas Society	New York, NY
The Andersons	Maume, OH
The Black & Decker Corp.	Towson, MD
The Buffalo News	Buffalo, NY
The Calvert Gallery	Washington, DC
The Carlton Group	Richmond, VA

The Coca-Cola Company	New York, NY
The Collectors Guild Ltd.	Wilmington, NC
The Firestone Tire & Rubber	Akron, OH
The First Boston Corp.	New York, NY
The Free Press Media Group	Hendersonville, TN
The Fur Vault, Inc.	New York, NY
The Harodite Finishing Co., Inc.	North Dighton, MA
The Hartz Mountain Corporation	Harrison, NJ
The Hoover Company	North Canton, OH
The Krughoff Company	Naperville, IL
The Moser Bag & Paper Co.	Cleveland, OH
The New England Council, Inc.	Boston, MA
The Pillsbury Company	Minneapolis, MN
The Price Company	San Diego, CA
The Principal Financial Group	Des Moines, IA
The Quillen Group	Groton, CT
The Singer Company	Stamford, CT
The Stackpole Corp.	Boston, MA
The Telemarketing Company	Chicago, IL
The United Illuminating Company	New Haven, CT
The Upjohn Company	Kalamazoo, MI
The Valspar Corporation	Minneapolis, MN
The Will-Burt Company	Orrville, OH
Thomas J. Seitz Co., Inc.	Racine, WI
Tingley Systems, Inc.	San Antonio, FL
Toledo Harbor Warehousing, Inc.	Toledo, OH
Touche-Ross	Washington, DC
Tracor, Inc.	Austin, TX
Trail King Industries, Inc.	Mitchell, SD
TransTech, Inc.	East McKeesport, PA
Tri-M Corporation	Kennett Square, PA
Triangle Research Development Corp.	Research Triangle Park, NC
Trinity Industries, Inc.	Dallas, TX
Trouble Shooters, Inc.	Omaha, NE
Truck Trailer Manufacturers Association	Alexandria, VA
Trucking Services, Inc.	Dearborn Heights, MI
U.S. Axle, Inc	Pottstown, PA
U.S. Bearings & Drives of CA, Inc.	Santa Clara, CA
U.S. Council for International Business	Washington, DC
USG Corporation	Chicago, IL
Ultrasystems, Inc.	Irvine, CA
Unilever United States, Inc.	New York, NY
United Illuminating Company	New Haven, CT
United Industries Inc.	Wichita, KS
Vanport Manufacturing, Inc.	Boring, OR
Village Green	Midland, MI
Virco Manufacturing Corporation	Torrance, CA
Vocational Rehabilitation Associates, Inc.	Eugene, OR
W.H. Brady Co.	Milwaukee, WI
W.R. Grace & Company	New York, NY
WIS, Inc.	Toledo, OH
Wainoco Oil Corporation	Houston, TX
Waldorf Corporation	St. Paul, MN

Warner Communications, Inc.	New York, NY
Wayer Corporation	Landover, MD
Western Publishing Company, Inc.	Racine, WI
Weyerhaeuser Company	Tacoma, WA
Whale Scientific, Inc.	Commerce City, CO
Whirlpool Corporation	Benton Harbor, MI
White Plains Iron, Inc.	New York, NY
Wholesale Florists & Florist Suppliers of America	Arlington, VA
William A. Price & Associates	Wheaton, IL
William H. Taylor & Company, Inc.	Allentown, PA
Wingspread Corporation	New York, NY
Women Entrepreneurs	Lincolnwood, IL
Women Featherbone Company	Gainesville, GA
Woodhead Industries, Inc.	Northbrook, IL
ZinYeast, Inc.	Marshfield, WI

National Governors' Association

John H. Sununu
Governor of New Hampshire
Chairman

Raymond C. Scheppach
Executive Director

H-7. U.S. - CANADIAN TRADE

The Governors support implementation of the Free Trade Agreement negotiated by the federal governments of the United States and Canada. Our support is contingent upon Canada and the U.S. doing nothing in the interim to violate the spirit of the explicit understanding affirmed in writing on January 2, 1988 to "exercise their discretion in the period prior to entry into force of the accord so as not to jeopardize the approval process or undermine the spirit and benefits of the Free Trade Agreement."

The agreement, while not fully addressing all issues relating to our bilateral trade, is expected to contribute to real growth in the economies of both signatories. It represents a positive step toward the open, competitive world trading system that we have endorsed. It provides for more timely and effective resolution of disputes between the two largest trading partners in the world.

Throughout the negotiations, the Office of the U.S. Trade Representative has sought our advice and made it a priority to keep us informed on progress. As the related legislation is developed and debated, we will continue to consult with the administration and Congress regarding its impact on state economies.

Emphasizing the importance of U.S. - Canadian relations, we will continue our meetings with the Canadian Premiers on issues of mutual interest, including options for greater trade cooperation between our two countries.

We believe that efforts should continue to be made to resolve those issues not fully addressed during the negotiations and that remaining inconsistencies with the General Agreement on Tariffs and Trade (GATT) rules should be vigorously pursued. We will work with Congress and the administration and within our states to minimize any adverse effects of the agreement.

The Governors have significant concerns about issues created or not fully resolved by the agreement and ask to be consulted as the implementing legislation or other measures are developed to ameliorate these problems.

The administration should enter into additional negotiations to address inequities regarding subsidies. Fair and open trade for all businesses requires resolution of the reality or perception of unequal treatment of certain industries due to differing national policies on subsidies.

Adopted February 1988.

STATEMENT OF
ANN H. HUGHES
DEPUTY ASSISTANT SECRETARY OF COMMERCE
FOR THE WESTERN HEMISPHERE
BEFORE THE
SUBCOMMITTEE ON
REGULATION AND BUSINESS OPPORTUNITIES
COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES
MARCH 8, 1988

Mr. Chairman:

Thank you for the opportunity to testify on the Canada Free Trade Agreement. The long range goal of any "free trade" agreement is to remove all barriers to commerce so that exchanges in goods and services, in technology, and in investment will flow freely and without regard to national boundaries.

Such free flow maximizes efficient use of resources to the net benefit of all who participate in the economies involved, whether consumer, worker, or investor.

In that total sense the agreement we have reached is a partial one - perhaps in the eyes of some imperfect - because it does not yet address all barriers or reconcile all varying points of view.

This agreement, however, goes a long way forward. It adds an increment of opportunity in Canada for American firms. It will lower their costs and make them more competitive in the U.S. versus imports, as well as when exporting overseas.

The ultimate beneficiaries will be the consumers in both countries, who will have a greater choice of products produced at lower costs because of a more efficient trading system.

The FTA phases out tariffs. This is no small achievement. For years we have sought to reduce high Canadian tariffs in multilateral negotiations, always with limited success. Dutiable American goods entering Canada now pay an average tariff of about 10 percent, which in 1985 was a $1.3 billion price burden on our exports to our nearest neighbor. In ten years, these will be gone. Dutiable Canadian goods entering the United States, in contrast, pay an average of only about 3 percent.

Some particularly high duties apply to otherwise competitive American products: for example, telecom equipment (10-18%) furniture (12-15%), paper and paper products (6-10%), printed material (10-28%) and household appliances (9-13%). Prohibitive American duties on competitive Canadian products are far fewer. Removal of these duties should greatly increase the two-way flow of goods, expanding sales and buyer choice and reducing consumer costs on both sides of the border.

The plywood provision of the FTA is a creative compromise reached in an overall negotiation. American C-D plywood is excluded in Canada via a product standard administered not by the government but by the private sector. We in the United States are as sensitive to interfering with the activities of private standards organizations as are Canadians.

The plywood agreement assures the fair treatment of the application by the American Plywood Association (APA) for an evaluation by the Canada Mortgage and Housing Corporation of the acceptability of C-D plywood for use in government financed housing. We have negotiated a fair process to ensure that the American Plywood Association's application gets an unbiased and technically accurate evaluation, and have provided for delaying the staging of plywood and particleboard tariffs to ensure it.

As Ambassador Holmer has noted, if the CMHC report says C-D plywood is acceptable, this would enable American plywood to be used in about 20% of residential construction in Canada. If the CMHC report is negative, or negative in part, it will be reviewed by an impartial panel of experts. This panel will review the technical accuracy and impartiality of the report. If the panel says the CMHC report was not accurate or fair, the reduction of tariffs on about $130 million of Canadian plywood, oriented strand board, particleboard and waferboard will not begin until remedial action acceptable to both sides has taken place.

A favorable report from CMHC paves the way for the additional use of American plywood as it gains consumer acceptance. We understand that it is standard practice in Canada for the construction industry and the provincial building code authorities to accept CMHC's evaluation reports. What's more, Canada could no longer continue to advertise the superiority of Canadian wood products versus the American by saying American plywood is unacceptable for use in Canada, as it currently advertises in third markets.

Plus, the report will provide a valuable tool in getting the private Canadian Standards Association to adopt a performance based standard for wood panel products. While we tried to eliminate completely standards-related problems in plywood, the Government of Canada could no more force the CSA or the Council of Forest Industries to adopt a certain standard than could the U.S. Government force the APA or the American National Standards Institute to adopt one.

We have worked with the American Plywood Association from the very start of the FTA negotiations. An APA representative was with the U.S. delegation every time this issue was discussed with Canadian negotiators. The APA initiated its application to the CMHC after this possible route was discussed with Canada in June 1987, a discussion at which APA was present. It was clear at the time that the CMHC application process would not solve the entire standards related problem but would open the door to selling U.S. plywood in Canada. Following a favorable CMHC decision, we intend to work with the APA to encourage Canadian acceptance of U.S. plywood in local building codes to further open the Canadian market.

I can assure you that we are not just hoping this issue will go away. We have worked with the industry before and after the conclusions of negotiations and will continue to do so, consistent with the terms of the FTA.

Now there are of course some things our negotiators failed to get in the Free Trade Agreement that we would have liked. But in none of these cases did we agree to a situation that is less attractive to the U.S. than what we now enjoy.

Obviously changes of the magnitude required by this historic agreement will require adjustments. Where these can be significant, the FTA wisely provides a substantial amount of time for them to take effect. Some have criticized the FTA not because it makes them temporarily worse off, but because it gives them less than they had hoped or expected. For those critics the question should be whether the FTA is a half filled glass - less than the full one they hoped for - but which is far better than the empty one they now hold.

I urge you to support this agreement. The opportunity to do so will not recur soon.

Thank you.

STATEMENT OF
DR. ERWIN L. SCHAFFER, ASSISTANT DIRECTOR
FOREST PRODUCTS LABORATORY
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Before the
Subcommittee on Regulation and Business Opportunities
Committee on Small Business
United States House of Representatives

Concerning the U.S.-Canada Free Trade Agreement
and its Potential Impacts on Domestic Plywood Manufacturers

March 8, 1988

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for this opportunity to participate in the discussion on U.S. and Canadian plywood standards. My testimony concentrates on 1) applicable standards controlling the manufacture and use of softwood structural plywood in the U.S. and Canada and 2) code recognition of these standards and the conforming plywood.

Due to the technical and highly complex nature of plywood standards and construction codes in the United States and Canada, the USDA Foreign Agricultural Service asked the Forest Service in late June 1987 to provide technical support to the Free Trade Agreement Work Group On Technical Barriers and Other Non-Tariff Measures. We have continued to provide technical support, as needed, since that time.

Forest Service Review of APA's Application to CMHC

On July 10, 1987, the American Plywood Association (APA) submitted to the Canada Mortgage & Housing Corporation (CMHC) an application for approval of APA-trademarked C-D grade plywood with exterior glue, as described in U. S. Product Standard PS-1 for Construction and Industrial Plywood. In November 1987, the Forest Products Division of the Foreign Agricultural Service requested the Forest Service to make a technical appraisal of APA's application. The Forest Service completed its review of this application in January 1988, which included evaluation of engineering data and information by the professional staff of the Forest Products Laboratory in Madison, Wisconsin. We found the APA application to be complete and technically sound for the purpose of consideration by CMHC. We recently provided you with a copy of our January 22, 1988, letter to the Forest Products Division of the Foreign Agriculture Service, which contained the review comments.

Forest Service Historic Role

The Forest Service, especially the Forest Products Laboratory, has been involved in research on wood panel and plywood technology since World War I, providing extensive technical leadership in the development of adhesives and panel products needed for high-performance aircraft, building construction, and other uses. A brief history of Forest Service involvement in these areas of research is provided in separate documentation for the record.

The Forest Service does not regulate or develop policy for the manufacture and use of structural plywood. Our role is to advise others on the technical aspects of manufacture and use. Our staff cooperates with the organizations that are instrumental in the establishment of standards, such as the American Society for Testing and Materials.

United States Product Acceptance by Codes

All wood-based panel products used in construction must be approved by one of three regional code organizations or by the local code organization having jurisdiction. Products approved by the Council of American Building Officials are assured recognition by all three regional code organizations. For each new or modified panel product, a code-recognized testing agency tests it and provides technical documentation of the results to the code organization having jurisdiction, which then reviews the submitted information and produces a decision on acceptance. Findings of approval result in a published statement of recognition, such as the National Evaluation Report.

Canadian Product Acceptance

Although the Forest Service is not knowledgeable in all aspects of Canadian building codes, we are aware of some of the aims and functions. Whereas U.S. code organizations largely limit their regulations to those that directly affect the safety, health, and welfare of occupants or communities, the National Building Code of Canada (BCC) also gives attention to comfort for occupants and quality in construction detail. This is well above requiring basic protection of the public from hazards.

The BCC relies upon standards for procedures and products developed under Canadian Standard Associations auspices. These standards, if related to use in construction, are referred to in the National Building Code of Canada.

Standards Assuring Plywood Performance in Construction

Code-recognized standards (i.e., those standards referenced by codes to govern product manufacture and use) pertaining to structural softwood plywood as used in the U.S. are of two types: specification and performance. It is important to distinguish between the two types, which may be defined as follows:

a. Performance-type standard defines regulations in terms of the desired results to be achieved and omits stating specific methods of achieving the results.

b. Specification-type standard (sometimes referred to as a product standard) specifies the exact materials or methods of construction that must be used for a given purpose. The desired results are not stated as it is assumed that the desired result will be achieved if the materials or methods so specified are followed.

These standards differ in how end-product quality and conformance are addressed. The performance standard has the advantage that any wood-based structural panel may be qualified for an end-use if it conforms to the relevant end-use criteria. A specification standard restricts qualification only to those panel types specifically identified in the standard.

U.S. and Canadian Structural Plywood Standards

United States. The American Plywood Association is the largest code-approved grade-marking and inspection agent for structural panels in the United States. The three major regional code agencies sanction APA to inspect and certify the production of structural panels with oversight by the code organizations. U.S. Product Standard PS 1-83 for Construction and Industrial Plywood establishes the requirement for producing, marketing, and specifying plywood for construction and industrial uses.

PS 1-83 includes elements of both specification and performance standards but primarily focuses on specification standards. New products must either conform to a set of specifications during manufacture or demonstrate performance quality after manufacture by meeting test criteria for strength, stiffness, and durability.

Canada. The National Building Code of Canada is strongly oriented toward a specification-type code rather than a performance-type code. We understand that a performance-type Canadian plywood standard has been developed and is under review. However, we are not aware of the exact nature of the standard.

Canadian vs. U.S. Sheathing-Grade Plywood

Canadian sheathing-grade, unsanded plywood must have at least C-grade veneer on both faces and core plies. Veneer thicknesses and number of plies for a given panel thickness are prescribed as well.

U.S. sheathing-grade, unsanded plywood is composed of both C-grade face and back, or C-grade face and D-grade back. Panels are bonded with exterior qualified adhesives. A small relaxation in requirements for durability is allowed when panels are intended for interior use (as compared to exterior use).

The specification for sheathing-grade plywood in Canada clearly differs from U.S. specifications. Although we have not compared panels produced in conformance with either Canadian or U.S. standards, we have no evidence that a substantial difference in properties or end-use performance exists. Furthermore, we are not aware of the existence of such research elsewhere.

Summary and Conclusions

The U.S. relies on both code-recognized performance and specification standards to assure the quality of sheathing-grade structural plywood. To our knowledge, Canada employs only code-recognized specification standards. Property differences may exist between Canadian and U.S. specification standards for plywood, but they have not been quantified.

A performance standard is oriented toward the end-use of the product and does not prescribe by what means the product will be manufactured. An increasing volume of plywood, as well as structural composite and non-veneered panels, is now manufactured under the provisions of APA performance standards for specific designated construction applications.

U.S. Product Standard PS 1-83 establishes national standards for the production of the principal types and grades of construction and industrial plywood. PS 1-83 also provides a basis for common understanding among producers, distributors, and users of these plywood products.

This concludes my prepared statement. I will be pleased to respond to any questions you may have.

SUPPLEMENTAL STATEMENT
DR. ERWIN L. SCHAFFER, ASSISTANT DIRECTOR
FOREST PRODUCTS LABORATORY
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Before the
Subcommittee on Regulation and Business Opportunities
Committee on Small Business
United States House of Representatives

Concerning the U.S.-Canada Free Trade Agreement
and its Potential Impacts on Domestic Plywood Manufacturers

March 8, 1988

FOREST SERVICE EXPERIENCE WITH STRUCTURAL PLYWOOD

Introduction

This historic overview is provided to illustrate the depth of involvement of the Forest Service, and more specifically the Forest Products Laboratory, in structural plywood research and application activities.

Historic Overview

The FS has been involved in research contributing to plywood technology since before World War I as part of its mission to nurture and utilize the U.S. forest resource as wisely as possible. This research has largely been generated by the Forest Products Laboratory (FPL) in Madison, Wisconsin. The results have been presented in a variety of forms and media and included in thousands of publications and presentations to the public. The work has been, and continues to be, implemented in concensus standards and by a variety of industry and other user groups.

The Forest Service has never carried a regulatory or policy-making role in the manufacture and use of structural plywood. We primarily advise others on the technical aspects of manufacture and use.

Chronologic Milestone

A brief history of Forest Service involvement in plywood research will illustrate the types of activities carried out by the Forest Products Laboratory:

- Pre-1917.--Plywood research focused on use of plywood for interior (decorative) applications using hardwoods and animal or vegetable glues as the adhesive. Panels so glued lack the moisture resistance needed for structural applications.
- 1917.--The need for water-resistant adhesives in plywood for use as a basic structural material in DeHaviland airplanes was recognized.

Research found that blood-albumin and casein adhesives provided such resistance.

- World War I.--Under military agency direction, the FPL provided glue and plywood inspection assistance on the plywood used in military aircraft. FPL assisted producing plants in improving plywood manufacture. In addition, FPL developed procedures for assessing mechanical properties (strength and stiffness) and controlling them during processing.

- Post World War I.--The results of wartime research and assistance substantially aided the development of a "new" plywood industry based largely on hardwoods.

- 1920's.--Research on Douglas-fir as a resource for plywood led to the initiation of Douglas-fir plywood manufacture. Research results on phenolic resin glue (currently the most commonly used adhesive base for exterior use) were applied commercially in the manufacture of plywood.

- 1930's.--Improved processing and plywood preservative treatment research was accelerated. Hemlock and larch species were found to be suitable alternatives to Douglas-fir.

- 1940's.--Structural plywood was established as the principal panel for wood construction. A dramatic increase in use was seen after World War II.

Research results began to be used in plywood concensus standards under the jurisdiction of the American Society for Testing and Materials (ASTM).

- 1960's.--Forest Service and FPL research contributes to the resolution of many problems associated with production and end-use of southern pine plywood.

- 1970's.--Additional ASTM standards were developed specifically for mechanical property evaluations of plywood.
  (Compression D3501; flexure D3043; shear D2718, D2719, and D3044; tension D3500; and toughness D3499.)

  Additional research on the use of hardwood species in structural plywood and effects of various processing alternatives was done. Technologies and economics of laminated veneer panels for conversion into laminated veneer lumber were evaluated. An assessment of panel product usage in mobile homes was undertaken. Evaluations of softwood plywood that received 10-years exposure to the weather were completed. The improvement of veneer cutting and drying processes initiated in the late 1960's continued through the 1970's.

- 1980-87.--Research on changes in thickness during hot-pressing of plywood and more efficient recovery of veneer during the cutting contributed to improving plywood processing. A comparison of the mechanical properties of full-size versus smaller-section plywood panels was evaluated to guide performance and quality control testing.

] Current.--The effect of treatments (preservative and fire retardants) on long-term mechanical properties of softwood plywood is receiving attention. In addition, the long-term deflection characteristics of plywood panels under load are being investigated. An assessment of what processing and material properties contribute to plywood panel ways is nearing completion. The effectiveness of surface treatments or coatings to improve exterior performance (minimize checking, splitting, and delamination near the edges) of laminated veneer is being evaluated.

Opening statement by Mr. Chandler

Small Business Committee hearing

on U.S.-Canada Free Trade Agreement

Tuesday, March 8, 1988

I would like to thank my friend from Oregon for conducting this hearing and for allowing me to participate.

The proposed Free Trade Agreement between the United States and Canada provides an opportunity to eliminate tariffs, reduce trade barriers and increase trade between the world's two largest trading partners. As Members of Congress, we must be excited about the prospect of freeing trade, and thereby increasing trade, with our neighbors to the north.

The objective of the FTA is to eliminate where feasible and reduce where possible barriers to free and fair trade. The negotiators from both countries are to be commended for their diligence and determination to create the most ambitious bilateral trade agreement in history. On the whole, the agreement is an important step in the march of free trade. However, as has been already noted, there is an area that despite the objectives of the agreement, perpetuates a trade inequity that cannot be ignored.

Provisions in the FTA which were thought to help U.S. softwood plywood will actually hurt the industry. The FTA will eliminate high tariffs on both U.S. and Canadian plywood. Unfortunately, the FTA did not address the issue of Canadian nontariff barriers. Under the agreement, U.S. plywood producers would continue to be denied access to 90 percent of the Canadian market, while Canadian producers would have free access to our market. Clearly, that was not the original intent of the FTA and does not fall under the definition of fair trade.

The oversight in the FTA that allows the continuation of nontariff barriers on the majority of the Canadian market poses a real threat to the U.S. plywood industry. The FTA gives Canada an unfair advantage and unlimited Canadian imports could result in millions of dollars in lost revenue to U.S. companies. During a recession, the effect could be much worse. In Washington state 6,000 people are employed at 18 plywood mills. If left uncorrected, the inequity in the FTA will ultimately cost jobs -- jobs that we can't afford to lose. And those jobs won't be lost because of inefficiency or a superior foreign product. Rather, Americans will lose jobs because of an unfair trade advantage that we have incorporated into the FTA.

I certainly support the objectives of FTA, and I am excited about the potential for economic growth in both countries, but I am concerned about the plywood inequity. The U.S. plywood industry is not asking for protection, it is merely asking for a chance to compete fairly by gaining equal access to the Canadian market. That was the objective of the FTA and we have an opportunity to address the oversight.

When the Administration sends the FTA implementing legislation to Congress, language can be included that would solve the plywood problem once and for all. I support a proposal that would give the U.S. Trade Representative three years in which to negotiate the end of the Canadian nontariff plywood barriers. If, at the end of that three year period, those barriers have not been eliminated, U.S. tariffs on Canadian structural panels will "snap-back" to their 1988 levels. This proposal would give the two governments an opportunity to resolve this problem through negotiations while providing a real incentive to do so. In addition, this proposal would ensure that the U.S. plywood industry is not unduly injured by the unfair Canadian nontariff barriers.

As I said before, the FTA offers a unique opportunity to promote the development of free and fair trade through our example with Canada. We have the means and ability to address an oversight that was included in the FTA before it is too late. The remedy is simple, the consequences if we ignore it will be severe.

Thank you, Mr. Chairman.

TESTIMONY OF WILLIAM T. ROBISON
PRESIDENT, AMERICAN PLYWOOD ASSOCIATION
CONCERNING THE U.S./CANADA FREE TRADE AGREEMENT

before the

SUBCOMMITTEE ON REGULATION & BUSINESS OPPORTUNITIES

HOUSE SMALL BUSINESS COMMITTEE

March 8, 1988

Chairman Wyden, and members of the Committee, my name is William Robison. I am president of the American Plywood Association, which represents over 75% of U.S. softwood plywood production.

Thank you for this opportunity to appear today to discuss the serious consequences that the Free Trade Agreement poses for the U.S. plywood industry and the many small businesses that produce plywood in the United States.

To provide you with some background: The U.S. softwood plywood industry directly employs about 29 thousand workers in 143 plants in 19 states. In addition, tens of thousands of other workers are indirectly employed by the U.S. plywood industry, in logging, trucking, and other related activities.

Many of the U.S. plywood firms are small businesses, particularly important in small communities. Currently, the U.S. plywood industry is alive and efficient, but today I am here to discuss a serious threat that we face.

In a nutshell, the Free Trade Agreement with Canada, by eliminating high plywood tariffs, would open our market to

Canadian plywood producers. Unfortunately, the Agreement does not remove most nontariff barriers to the use of U.S. plywood in Canada. Thus, our market will be open to Canada, but the vast majority of Canada's construction market will be closed to us.

The results could be disastrous for the U.S. plywood industry. While our industry is not now opposing the FTA, we feel strongly that the unfair Canadian nontariff barriers must be eliminated if our tariffs are eliminated. Let me explain.

Currently, the United States imposes a 20% tariff on plywood imports. Canada imposes a 15% tariff on plywood imports. Thus, there is little plywood trade between the two countries. Further, Canada maintains substantial nontariff barriers. These barriers prevent the use of plywood made with D-grade veneers and Southern Yellow Pine in Canadian construction. These restricted products account for over 80% of U.S. production.

To date, Canada has refused to adopt either Canadian standards based solely on performance or U.S. standards that would allow our plywood to compete in Canada on the basis of its strength and durability. Rather, Canada maintains a prescriptive limitation on the use of plywood made with D-grade veneer and plywood made from trees not indigenous to Canada.

Therefore, our plywood is not permitted in Canadian construction despite its demonstrated performance for exactly the same construction applications in the U.S. and most of the rest of the world. In other words, the Canadian standards act as arbitrary nontariff barriers that protect the Canadian industry.

This is not a new issue. In the Tokyo Round of Multilateral Trade Negotiations, the United States and Canada agreed to reduce plywood tariffs once the standards issue was resolved. When those efforts failed, the two countries agreed to maintain current tariff levels. Since that time, it has been the position of the U.S. government and industry that plywood tariffs should only be reduced if all nontariff barriers are eliminated. Unfortunately, that position was changed in the FTA.

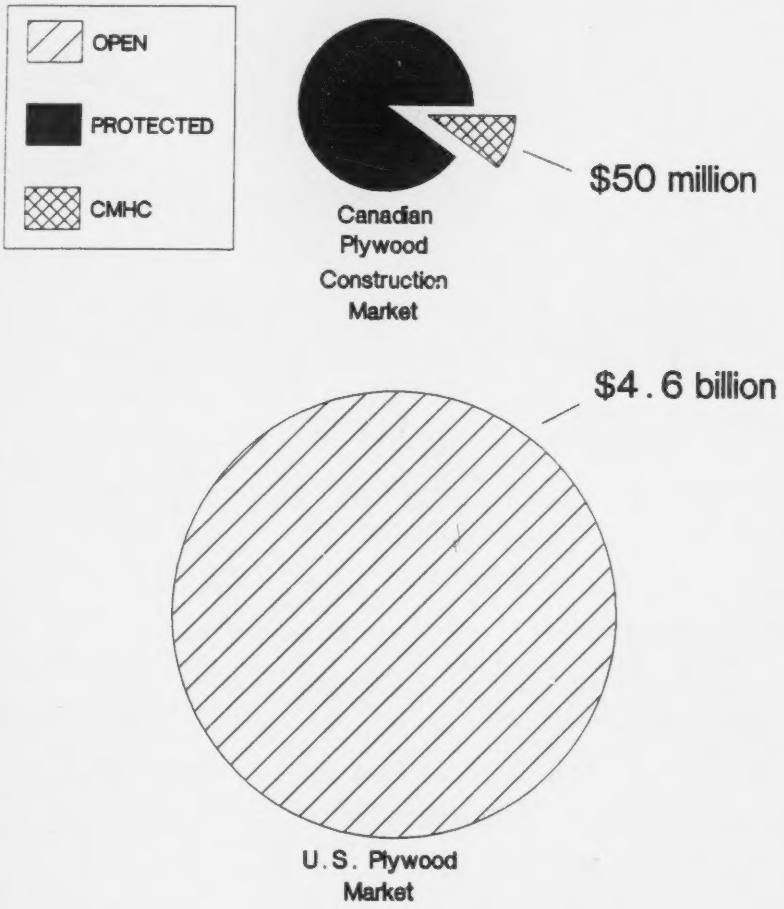
Pursuant to the FTA, the Canadian Mortgage Housing Corporation (the CMHC) must review the nontariff barriers applicable to plywood used in CMHC housing -- this is less than 10% of Canada's construction plywood market. If CMHC permits use of CDX plywood, tariffs on all structural panels are to be eliminated over ten years. If CMHC does not permit the use of CDX plywood, and that decision is not affirmed by an expert panel, then the United States may delay tariff cuts on structural panels.

In other words, if Canada grants access to less than 10% of its construction market, we must give the Canadians 100% access to our market, which is roughly ten times the size of the entire Canadian market. (Figure 1)

How did this happen? During the FTA negotiations, Canada argued that its nontariff barriers were promulgated by a

FIGURE 1

ACCESS UNDER THE FTA
(U.S. $)



private organization, the Canadian Standards Association, and were outside of its control.

On the contrary, the real impediment to use of U.S. plywood in Canada is Canada's National Building Code, published by the Canadian National Research Council, a federal government organization.

The National Building Code has incorporated the private, discriminatory standards developed by CSA and there is nothing to prevent the Government of Canada from accepting U.S. performance standards on an equal basis.

This situation, a protected Canadian home market and a completely open U.S. market, could be disastrous for the U.S. plywood industry. First, let me explain what market we are talking about. The residential and nonresidential construction markets account for about two-thirds of plywood consumption. Uses include roof sheathing, wall sheathing, subflooring, shear walls and other structural and decorative applications.

In addition to construction plywood, the structural panel industry produces waferboard, oriented strand board, and structural particleboard which can be used for some of the same applications. Plywood is also used for nonconstruction purposes, such as for crating and furniture. We must continue to expand all these markets internationally.

There are a couple of things that you should understand about our markets. First, if our softwood plywood could gain access to Canada, it could compete with Canadian plywood and waferboard, and increase the demand for U.S. softwood plywood. Second, even if you just focus on softwood plywood, the injury that the FTA could inflict is huge. There is no opportunity for U.S. producers to develop Canadian markets. At the same time our industry would face an unrestricted influx of Canadian structural panels into our domestic markets.

Canada's nontariff barriers bar over 80% of U.S. softwood plywood from Canada, while all Canadian plywood will have access to the United States. To give you some order of magnitude: The U.S. softwood plywood market is $4.6 billion and the Canadian softwood plywood market is currently $710 million (U.S. dollars). Even if the CMHC approves U.S. CDX for use in Canadian government financed housing, CMHC housing accounts for only approximately $50 million in plywood consumption.

As a result of all this: the U.S. industry will be severely injured. An available U.S. market would likely encourage an increase in Canadian production not justified by market forces, either by increased capacity utilization, modernization or expansion. This will dramatically increase shipments to the United States and artificially depress prices.

Even if there is no Canadian capacity expansion and only the 300 million square feet of current excess Canadian plywood capacity were shipped to the United States, the U.S. industry will lose more than $125 million in revenues.

In a housing recession year, when U.S. consumption would drop, Canadian shipments would likely increase, and U.S. revenue losses would be much worse. The situation could become disastrous if the Canadian industry increased its capacity and/or dumped in the U.S. market during a recession.

Not only will this seriously injure U.S. plywood producers, but in the long run, this inequitable situation will tend to move jobs north of the border. (Figure 2) U.S. mills will be forced to close down and, just as importantly, companies deciding where to invest in plywood plant modernization and expansion will be more likely to invest in Canada, where they will have access to both markets, instead of investing in the United States.

In contrast, U.S. producers will be denied the promise of the FTA -- a chance to compete on an equal basis in Canada. Moreover, if U.S. plywood producers have access to the Canadian market, it would relieve supply pressure in the United States and discourage Canadian companies from overproducing and dumping into our market.

In short, under the FTA, trade in plywood will be totally unfair unless the U.S. industry had equal access to the Canadian market. That is all that we are asking for, equal access to Canada.

This problem can be solved if the Administration or Congress has the will to insist that the Canadian market be open to U.S. plywood before the tariffs are completely removed. This had been the position of the U.S. government

FIGURE 2

IMPACT ON U.S. ECONOMY:

- Lost Revenues for U.S. Industry
- Closing of U.S. Mills
- Lost U.S. Jobs
- Reduced U.S. Investment
- Reduced Local Revenues

during and since the Tokyo Round, and it should be the position today.

Our government should negotiate with Canada, before eliminating the plywood tariffs, to eliminate the nontariff barriers. If such negotiations fail, action must be taken that would ensure a solution.

Legislation implementing the FTA provides an opportunity to address this problem. If the problem is not resolved before legislation is presented to Congress, a solution should be mandated in that legislation.

The American Plywood Association currently supports a proposal that would effectively require resolution of the plywood standards problem within a fixed period after implementation of the FTA. If the matter is not resolved, tariffs on structural panels should be returned to their 1988 level.

In conclusion, the current situation is fundamentally unfair. It will injure the U.S. plywood industry and ultimately cost U.S. plywood jobs. It will limit exports and increase imports. This situation should be changed.

It is now possible to solve this problem that could cost this industry hundreds of millions of dollars in five to ten years -- a problem that will be substantially more difficult to solve then. I hope that with your assistance this issue will be forcefully addressed in the FTA implementing legislation.

Testimony of John N. Galloway,
President, Hood Industries, Inc., Hattiesburg, Mississippi,
before the
Subcommittee on Regulation and Small Business Opportunities,
House Small Business Committee
Washington, D.C., March 8, 1988

Chairman Wyden and members of the Committee --

I am John N. Galloway, President of Hood Industries, an independently owned company which operates two Southern pine plywood plants at Beaumont and Wiggins in the State of Mississippi. I am also a Trustee of the American Plywood Association. I would like to briefly describe the history of these operations before commenting on the troublesome issue of the effect of the Free Trade Agreement with Canada on the U.S. plywood industry.

During the 1970s the Beaumont and Wiggins plants were operated by large wood products companies. In the early 1980s both plants were shut down for economic reasons, causing hardships on the workers, as well as surrounding communities.

Our small company began with the acquisition of the Beaumont plant, which we re-opened in March of 1983, and then the Wiggins plant, which we re-opened in May of 1984.

My point is that our 415 plywood workers in Beaumont and Wiggins have survived hard times and are making a vital contribution to the economy of Mississippi. They appreciate the relative economic stability they have enjoyed for the past several years.

The combined payroll of our two plywood operations was nearly $7 million in 1987 -- and most of that money was put to use in our local economy. They also spent about $3 million in supplies and replacement parts last year -- and well over 90 percent of that business was local. These two plants in 1987 also consumed over $20 million in timber, which, unlike our larger competitors, is delivered by over 150 small independently owned timber companies. We are also planning capital expenditures of nearly $2 million at these plants in 1988.

Our essentially rural plywood industry in Mississippi and across the South has expanded from a handful of plants in the early 1960s to the point in 1987 where it produced 51 percent of the structural panels made in the United States.

As I have indicated in the case of Hood Industries, our plywood industry has played a basic role in strengthening the economies of small communities throughout the South. I am here today because I believe that as currently drafted, the plywood provisions of the Free Trade Agreement with Canada pose a serious threat to the stability of our industry, and have the potential to wipe out many of the gains we have made.

The production of our company comes entirely from Southern pine timber, and is also 100 percent CDX sheathing grade. The combined annual production of our two plants is about 340 million square feet.

There are two main issues in the Free Trade Agreement that concern us:

(1): In the first place, the Agreement as drafted does not address the obviously discriminatory Canadian standards that would bar any panel made from a tree not grown in Canada. This would include all Southern pine production, and amounts to naked protectionism at a level that leaves the Japanese far behind.

(2): As producers of high quality Southern pine CDX sheathing we are even more concerned, however, about Canada's exclusion of panels containing D-grade veneer. As others have stressed, that restriction also is not founded on panel performance but is yet another of the many barriers set up for the purpose of protecting the Canadian plywood industry from competition.

Southern pine CDX plywood is recognized across the United States, and just about everywhere in the world except Canada, as a reliable and economical structural panel for a wide range of construction applications. It should be permitted freedom of access to the Canadian market for all of the uses for which it is intended.

Should the current provisions of the Free Trade Agreement not be amended, Canadian plywood producers would have a one way ticket to the large U.S. plywood markets we and others have worked hard to create while we would be barred from the Canadian market. Ultimately, it will cost us jobs.

Hood Industries ships a significant amount of its sheathing production to states along or close to the eastern seaboard of the United States -- to areas that would be readily accessible to waterborne shipments from Canada.

With duty-free access to markets such as these, the Canadian industry could claim a growing share of our basic domestic markets. Even though we have a product which we believe many Canadian consumers would like, we would be powerless to respond. A new recession in domestic plywood manufacturing and renewed hard times for our plants and employees in rural Mississippi could result -- a situation that can be avoided if the problem is remedied in the enabling legislation. This, gentlemen, is what we ask you to do. The legislation should make it clear that before the tariffs on plywood are completely eliminated, the standards issues must be resolved.

My final point concerns export market development. The international marketplace is of increasing importance to producers of structural panels throughout the North American Continent. I share the view that Canadian standards as now written are slowing the growth of the total global market for structural panels because of their unnecessary restrictions on grade and the confusion they create concerning North American plywood.

If we can resolve our differences with our Canadian colleagues and develop a common set of standards fairly based on product performance in designated end-uses, I truly believe the industries of our two countries would each enjoy a more prosperous future.

In closing, I would like to say again that we are not afraid of free trade with Canada or any other country. We only ask that this free trade be fair trade.

Testimony of Bruce R. Stevenson,
President, Bingen Plywood Company, Bingen. Washington,
before the
Subcommittee on Regulation and Small Business Opportunities,
House Small Business Committee
Washington, D.C., March 8, 1988

Chairman Wyden and members of the Committee --

I am Bruce R. Stevenson, President of Bingen Plywood Company -- a small independent operation in the eastern foothills of the Columbia Gorge region in Washington State. For the past 42 years, our company has provided high quality plywood products to construction and industrial markets throughout the United States and overseas.

Our family-owned company is the major employer in the Columbia River Gorge, an economically depressed rural area of the Pacific Northwest. Counting lumber operations, we provide direct employment to more than 450 persons drawn from small communities on both sides of the Columbia River. The number employed in plywood manufacturing at Bingen is 120.

On the Washington side, we have employees from Bingen, White Salmon, Lyle, Trout Lake, Underwood and Goldendale. Others of our work force cross the Columbia daily from Hood River, Cascade Locks, Parkdale and other communities in Oregon. Because of what is termed the multiple effect, our plywood and lumber operations also support about 1,300 other jobs in the two states.

Approximately 75 percent of our production is CDX sheathing grade plywood bearing the trademark of the American Plywood Association. During 1987, we produced 100 million square feet of plywood, 3/8-inch basis.

That quantity may seem small when compared to the total 1987 U.S. production of 23.4 billion square feet. However, it is large in terms of the company's importance to the communities we represent. The same can be said of all independent producers in our geographically diversified national plywood industry.

I wish to emphasize to the Committee today that our small company is not afraid of competition, from any quarter. We are told that the quality of our plywood products, including CDX sheathing, is equaled by few other plants. The recovery of saleable products from the raw log is competitive with any plant of which I'm aware, domestic or foreign.

Furthermore, according to industry consultants and knowledgeable equipment vendors, including Canadian vendors and other informed sources, our productivity per man hour for the production of green veneer is unmatched in the U.S. or Canada. And green veneer amounts to half of the entire process of producing finished plywood.

During the last two years and over the next two years, we will spend well over $15 million on plant improvements. We are prepared to meet Canadian and global competition. However, our commitment to our employees and to future investments is severely restrained by our fear of overriding economic factors over which we seem to exercise little control.

The absolutely unnecessary removal of important timber resources from harvestable federal, state, and private lands, to satiate extreme environmental positions, is clearly the greatest threat to our survival. But I'm not here to fight that battle today.

Our fight today is to prevent our primary domestic markets from being inundated with Canadian plywood as a result of the Free Trade Agreement, while Canada's nontariff barriers to D-grade veneer would deny us any access to Canadian markets.

Basically, Canada is keeping our plywood out of their market by using prescriptive standards, rather than having standards that are based solely on performance requirements of the market. I understand that others will speak today about the technical aspects of the unfair Canadian standards, but I want to add that if Canada would adopt standards based solely on the strength and durability of plywood, we could compete in Canada.

Again, we are not afraid of competition, but competition between Canada and the United States should be free and open in both directions.

Most of the CDX sheathing markets that Bingen and others have worked hard to develop in the western U.S. are within easy shipping range of Canadian plywood sheathing producers.

With a protected home market and an open border eventually freed from tariffs, Canadian mills would have strong incentive to increase production and dump their product in the U.S. This could have a serious negative impact on the competitive position of U.S. plywood producers, especially those located in the West.

The crux of our position is that if the United States opens its plywood market to Canada, Canada should open its markets to the United States. This was the promise of the Free Trade Agreement.

Bingen Plywood Company has been able to compete and remain independent in spite of the dynamic growth of much larger companies and their penchant for acquiring well-managed operations such as ours. We have always accepted the challenge of our free enterprise U.S. economy.

Now we are confronting a situation, in the name of so-called "free" trade with Canada, which flies in the face of free enterprise by proposing to hand nearly all the advantages to one side.

The ironic thing about this situation is that in a "free" trade agreement, the only excusable justification for imposing barriers to trade, as I interpret it, is for reasons of national defense or to protect an infant industry. The Canadians certainly have one of the best developed plywood industries in the world. The industry is strongly supported by the government through a quasi-governmental-private technical group, and most importantly, by a timber management program that virtually allows stumpage prices to vary according to market conditions.

The current provisions of the plywood section of the Free Trade Agreement clearly need amendment to insure equal access by U.S. producers to the Canadian market.

As Congressman Don Bonker of Washington said nearly three years ago regarding free trade with the Canadians, our industry doesn't have to be the punching bag on this trade issue.

Thank you, Congressman Wyden and members of the Committee, for the opportunity to bring these views to you today.

TESTIMONY OF THOMAS R. FLINT

DIRECTOR, TECHNICAL SERVICES, AMERICAN PLYWOOD ASSOCIATION

ON THE TECHNICAL BARRIERS TO U.S./CANADIAN PLYWOOD TRADE

Before the

SUBCOMMITTEE ON REGULATION & BUSINESS OPPORTUNITIES

Of the HOUSE SMALL BUSINESS COMMITTEE

March 8, 1988

I am Thomas R. Flint, Director of the Technical Services Division of the American Plywood Association (APA). As has been previously stated, the U.S. softwood plywood industry includes 67 softwood plywood producers who operate over 140 plants, located in 19 states. In 1987 these plants produced 23.4 billion square feet of plywood. The American Plywood Association represents firms accounting for approximately 75% of the total softwood plywood produced in the United States.

A principal function of the Association is its Technical Services activity which includes:

1. Development of technical documentation to validate product use recommendations for construction and industrial applications as well as sophisticated engineered designs;

2. Securing acceptance of APA member products for uses controlled by building codes;

3. Serving as secretariat for industry product and performance standardization activities including the development of technical data to support standards provisions and criteria, and;

4. Carrying out the activities necessary to establish national and international acceptance of those standards.

The Association operates a research and testing laboratory in Tacoma, Washington with a laboratory staff of 20 professionals and 7 technicians. The Association laboratory is recognized as one of the finest facilities of its kind in the world and its staff is highly competent and professional. Currently the president of the prestigious Forest Products Research Society is a member of the Association technical staff. Additionally, we operate 7 satellite laboratories that carry out quality inspection and testing activities for our member companies.

Test reports published as a result of work completed in our research laboratory over the past 50 years provide the essential basis on which plywood is accepted by practically all appropriate regulatory bodies in this and foreign countries. Uses include, among others, it's acceptance for critical safety applications as structural elements of buildings subject to earthquakes and hurricane hazards.

The Plywood Association and the building codes recognize minimum thicknesses and grades of plywood adequate to perform various intended functions. For example, U.S. Product Standard PS 1-83 recognizes what we call D-grade veneer as a minimum veneer quality for a class of production suitable for interior use. When panels containing D-grade veneer are bonded with waterproof glue, they are recognized for construction and industrial uses where protection against moisture due to long construction delays or other conditions of similar severity, such as pressure-preservative treating, is required. In pressure-preservative treating, panels are placed in large tanks and pressure impregnated with preservative chemicals carried in hot water solution until they are fully saturated. The panels are then kiln dried to a moisture content of 18% or less after treatment. That is a severe test of bond durability, and continued CDX performance in this application vouches for its performance in the less stringent exposure conditions of standard construction.

D-grade veneer is recognized in U.S. standards because research has shown that such quality veneers can be bonded with exterior waterproof glue into a serviceable product for general construction and industrial uses and D-grade quality is characteristic of much of the veneer yield from mature timber. Were plywood with D-grade veneer bonded with exterior glue not serviceable one would have difficulty explaining both the growth and worldwide recognition of that class of production. The trade refers to that class of production as CDX. The X stands for exterior glue.

In 1950 the industry produced 2.5 billion square feet of softwood plywood (3/8" thickness) of which 377 million square feet or 14.8% was CDX. By 1970 industry volume had grown to more than 14 billion square feet of which 5 billion or 35% was CDX. In 1977 the volume of CDX was over 10 billion square feet and has remained since then at about 50% of production. CDX and other panels using D-veneer have been the backbone of our industry's production. Even back in 1950, D-veneers were included in 60% of the panels produced.

Residential construction is the major market for CDX plywood in the United States. Current estimates indicate that the roofs of 90% of new residential construction are sheathed with structural panels of which CDX is the dominant grade. Further, in severe seismic areas such as the West Coast including Alaska, 62% of all commercial and industrial buildings are built with CDX plywood roof sheathing for seismic resistance.

Not only has CDX been recognized by HUD and all major building code organizations in the U.S., it has captured the confidence of the American engineering, construction and architectural communities and is recognized by most of our trading partners with the exception of Canada. Japan, Germany, Sweden, Denmark, Holland and the United Kingdom all recognize and accept CDX plywood. Only Canada among our major trading partners has failed to accept CDX.

The problem with Canada lies in the Canadian plywood standard and their regulatory system. Both the Canadian Mortgage and Housing Corporation and the National Research Council which publishes the Canadian National Building Code require that plywood comply with standards of the Canadian Standards Association. The CSA standards for plywood, unlike U.S. standards, do not provide for D-grade veneer. Their minimum veneer grade is C and the corresponding minimum panel grade is C-C.

Often the questions are asked: What's the difference between C-C and C-D? Is American CDX plywood a product of inferior quality? And should CDX be accepted for its intended use in Canada?

On a technical level, these questions involve a number of complex variables.

But it can be unequivocally stated that American CDX plywood -- a quality product backed by more than 40 years of service in a wide variety of demanding environments -- is fully equal in performance to Canadian C-C plywood when used for its intended purpose.

It's easy to list the differences between Canadian C-C and U.S. C-D plywood. In the case of Canadian C-C, veneer grade requirements limit knotholes to 1-1/2 inches standard in outer plies.

U.S. C-D standards are different in that they allow face ply knotholes to occasionally measure 1-1/2 inches (1-inch standard), with back ply knotholes to occasionally measure 3 inches (2-1/2-inch standard). However, standards for glue bond quality of U.S. C-D and Canadian C-C are the same. Species vary because some woods which grow in the U.S. do not grow in Canada (e.g., southern pines, redwood and sweetgum).

Uses for different types of plywood can also vary. The U.S. seeks C-D recognition in Canada only for use where it is protected from direct weather exposure -- e.g., in roof sheathing where the plywood is covered with roofing, for wall sheathing where it is covered by siding and for floor sheathing where it is also protected. These uses cover the vast majority of structural plywood consumption. The Canadian C-C grade, on the other hand, is recommended for all protected and unprotected exterior use.

The critical point is that on the basis of structural performance for specific protected uses, there is no difference between Canadian C-C and U.S. C-D. The ability of American plywood containing D-grade veneer to satisfy building code and performance requirements has been amply documented in laboratory tests and under the most severe actual use conditions. In other words, if Canada's standards for these uses were based solely on performance, U.S. plywood would qualify.

It's ironic that the Canadians are in the process of promulgating a structural panel performance standard that is patterned after a performance standard developed by the American Plywood Association. The APA Performance Standard covers plywood, particleboard, waferboard, oriented strand board and composite board. The APA standard and all the documentation related to it is based on the performance and historical acceptance of D-grade veneer. Essentially, what the standard says is that it is perfectly acceptable to produce a structural panel from any kind of wood base furnish (veneer, wafers, strands, particles) and it can be used for roof and floor sheathing so long as it passes strength, durability and stiffness tests designed to simulate actual use conditions. The Canadians have basically taken the APA Performance Standard verbatim except they have inserted a requirement on veneer quality that limits veneered panels to C-C grade. It is the prescriptive requirement in the performance standards, not the performance requirements, that continues to keep our plywood out of Canada.

The irony is the Canadians have apparently accepted U.S. standards for products other than plywood, e.g. oriented strand board, that meet performance that is calibrated against CDX, but they don't want to open the door for CDX. Neither have they come forth with any hard evidence that CDX will not perform adequately for its intended use.

Plywood is not an infallible product. Delamination can occur in even the highest quality grades if good gluing practices are not followed. Veneer grade defects can be influencing factors, but no more so with C-D than with C-C. The performance history of CDX and its production growth are clear evidence of its capability and acceptability. If Canada would eliminate its prescriptive standards and adopt standards based solely on performance for the intended use of plywood, U.S. plywood could compete in Canada.

HOOD
INDUSTRIES

February 29, 1988

The Honorable Ron Wyden
U.S. House of Representatives
1406 Longworth House Office Building
Washington, D.C. 20515-3730

Dear Sir:

As President of Hood Industries, an independently owned company which operates two Southern pine plywood mills at Beaumont and Wiggins and a Southern pine sawmill at Waynesboro in the State of Mississippi, I am deeply concerned about the free trade issue with Canada.

The production of our company is entirely from Southern pine timber and our plywood mills produce 100 percent CDX sheathing grade. While this does not appear to be very significant on the surface, let me assure you that from the viewpoint of our 580 employees it is for two reasons:

(1) The Free Trade Agreement as drafted fails to consider the current Canadian standards that prohibits any panel from being used in Canada that was produced from a tree not grown in Canada. To me this creates UNFAIR trade.

(2) The Free Trade Agreement as drafted fails to consider the current Canadian standard that prohibits any panel from being used in Canada that contains D-grade veneer. This restriction is not founded on performance of the panel, but another barrier set up for the purpose of protecting the Canadian plywood industry from competition.

Should the current provisions of the Free Trade Agreement not be amended, many U.S. companies such as ours will be subject to losing the numerous U.S. markets we and others have worked hard to create.

In closing, I ask that you give strong consideration to our concerns and do something. We are not afraid of Free Trade as long as it is FAIR.

Sincerely,

John Galloway
President

deh

PlumCreek Timber Company, Inc.
First Interstate Center Suite 2300
999 Third Avenue Seattle, WA 98104
206/467-3601

David D. Leland
President & CEO

February 26, 1988

REP. RON [illegible]

The Honorable Ron Wyden
United States House of Representatives
1406 Longworth House Office Building
Washington, D. C. 20515-3703

Dear Congressman Wyden:

Plum Creek Timber Company, Inc. wishes to express its grave concern regarding the softwood plywood portions of the Canadian Free Trade Agreement. As the agreement now stands, duties from both countries are scheduled to be reduced over a ten-year period, but the important issue of nontariff barriers is not being addressed. Plum Creek Timber Company, the wood products group of Burlington Northern Inc., has operations in Oregon, Washington, Idaho and Montana, including two plywood plants located in Montana. We are ardent supporters of free trade; however, we strongly believe that the removal of duties on softwood plywood should be accompanied by genuine access to the Canadian market through removal of their nontariff barriers.

U.S. standards, building codes and other regulatory tools provide a ready means of acceptance for foreign softwood products. In the United States, products are judged based on how they perform in service rather than how, where or what they are made of. Conversely, Canadian standards and codes preclude the structural use of any panel having D-grade veneer or any species of wood not grown in Canada. These nontariff barriers prevent utilization of 80% of U.S. plywood construction. Unless these barriers are removed our industry will feel the impact of 2.5 billion feet of Canadian plywood capacity on our markets without equal access to Canada. This can only lead to greater American trade deficits.

We respectfully urge you to ask the U.S. Trade Representative to provide relief from this problem in the implementing legislation they will send to Congress for approval.

Sincerely,

David D. Leland

cc/ W. T. Robison
G. F. Tucker
R. E. Manne

Potlatch

James R. Morris
Vice President, Western Division
Wood Products Group

Potlatch Corporation

P.O. Box 1016
Lewiston, Idaho 83501
Telephone (208) 799-1352

February 18, 1988

Congressman Ronald L. Wyden
Room 1406
Longworth House Office Building
Washington, D.C. 20515

Dear Congressman Wyden:

As Chairman of the Board of Trustees of the American Plywood Association, I wish to thank you for your efforts to develop a sound free trade agreement with Canada. As you know, the Association is very much interested in getting acceptance for CD sheathing for home construction in Canada. A second concern that should be corrected relates to the fact that plywood made of Southern Yellow Pine is also excluded because that species is not indigenous to Canada. Without these modifications, free trade will not be fair trade, as non-tariff barriers will exclude a major portion of the sheathing production from the Canadian marketplace while at the same time they can ship to the U.S. without limitation.

We in the industry appreciate your efforts and hope very much that you will be successful.

Very truly yours,

James R. Morris

JRM/lv

3330 Deborah
Monroe, LA 71201

February 23, 1988

The Honorable Ron Wyden
U.S. House of Representatives
1406 Longworth House Office Building
Washington, DC 20515-3703

Dear Congressman Wyden:

I am writing to you to request your help as Chairman of the Small Business Subcommittee. The matter that is of great concern to the Plywood Industry is a need for Canada's removal of all nontariff barriers which would continue to be imposed on U.S. produced plywood even after the Free Trade Agreement goes into effect. We ask that the implementing legislation require that nontariff barriers be removed before the duty reductions would be put into place.

I understand that various industry representatives will be testifying on the details of this matter before your Subcommittee. We certainly would appreciate your help.

Yours very truly,

William I. Morrow

ly

Manville Corporation
Suite 750
1625 K Street, N.W.
Washington, D.C. 20006
202 785-4940

Executive Offices

2 March 1988

The Honorable Ron Wyden, M.C.
1406 Longworth House Office Building
Washington, D.C. 20015

Dear Representative Wyden:

We wish to thank you for convening a March 8 hearing of the Subcommittee on Regulation and Business Opportunities to review plywood provisions of the Canadian Free Trade Agreement.

As you may know, Manville Forest Products Corporation is a manufacturer of wood and paper products with timber resources in Texas, Arkansas, and Louisiana. In particular, we manufacture softwood plywood in Arkansas and Louisiana. This product line generates approximately 40 million dollars in annual sales, and creates employment for 400 workers in these two states.

While we applaud the overall intent of the Canadian Free Trade Agreement, we are concerned that without elimination of Canadian non-tariff barriers, the U.S. plywood industry will be exposed to an increased level of Canadian plywood imports. Over time, we believe this would negatively impact this industry, ultimately affecting employment in our domestic marketplace in addition to altering the delicate balance of trade.

Representative Wyden, we are hopeful that as a result of your deliberations on March 8, Administration and Canadian trade officials will be convinced of the merits to remove non-tariff trade barriers on plywood.

We appreciate your attention in this matter. If you or your staff have questions relative to Manville Forest Products Corporation, or our plywood division specifically, please do not hesitate to let us know.

Sincerely,

William Morrow

William Morrow
Vice President and General Manager,
Wood Products, Forest Resources, Energy Resources

AMERICAN PLYWOOD ASSOCIATION

William T. Robison
President

January 25, 1988

Mr. Ron Wyden
U. S. House of Representatives
Room 1406, Longworth House Office Building
Washington, D. C. 20515-3703

Dear Congressman Wyden:

On behalf of the American Plywood Association, I want to take this opportunity to thank you for your efforts to correct the problem that the U.S.Canada Free Trade Agreement created for the U.S. plywood producers. Bob Anderson tells me that you spoke on the issue at your press conference on January 15. With strong congressional support such as yours, I am sure that we can solve this.

I was also very pleased to see the letter that Lindsay Thomas, Sonny Callahan and you sent to Ambassador Yeutter on January 7. You are correct to state that the Administration should come forward with implementing legislation that will fully and permanently solve the plywood problem. Without a solution, Canadian producers, with a protected home market, will ship plywood into the United States, depress prices and injure U.S. producers. In addition, our producers will be denied the promised benefit of the FTA, equal access to the Canadian market.

Thank you again. I hope that we can continue to work to solve this problem.

Sincerely,

W. T. Robison

WTR:bl

cc: Lindsay Thomas
Sonny Callahan

7011 So. 19th St. • P.O. Box 11700 • Tacoma, WA 98411 • (206) 565-6600

AMERICAN PLYWOOD ASSOCIATION

William T. Robison
President

March 18, 1988

Congressman Ron Wyden
1406 Longworth House Office Building
Washington, D. C. 20515-4811

Dear Congressman Wyden:

My thanks and appreciation for the support you showed the plywood industry March 8 in the Small Business Subcommittee hearing on the Canadian Free Trade Agreement.

The Canadian Mortgage Housing Corporation has now advised us of their rejection of our application for acceptance of our C-D grade plywood in housing that it finances --- 10% of the Canadian construction plywood market. Thus, the Canadian Government is figuratively trying to slam the door on the foot which the U.S. Government thought the negotiations had gained for us against Canadian protectionist regulations.

The CMHC report does not represent a technical evaluation of U. S. C-D plywood for its intended end use. It is simply a recitation of some of the well-known nontariff barriers Canada has installed to protect their plywood industry,

We have urged the United States Government to reject the response on the ground that it does not conform to the letter or the spirit of the Free Trade Agreement. Since there is nothing of substance for a panel of experts to review, we have also asked that the U.S. invoke the provisions of Article 2008 of the Agreement and leave our structural panel duties in place until such time as the standards issue is satisfactorily resolved.

Yesterday, Ambassador Yeutter testified before the Senate Finance Committee that CMHC's action was a breach of the Agreement and the Administration is formulating its precise plan of action. We believe that the Administration is well on its way to solving this problem along the lines that we suggested. Your assistance has been instrumental in making this possible. The March 8 hearing put the Administration on record concerning the intended effect of the FTA and has greatly facilitated resolution of this problem.

Thank you once again.

Sincerely,

Bill Robison

WTR:bl

cc: Bruce Stevenson
John Galloway

7011 So. 19th St. / P.O. Box 11700 / Tacoma, Washington 98411 / 206 565-6600
TLX 32 7430

Willamette Industries, Inc.

Building Materials Group

FLOYD VIKE
VICE PRESIDENT

P.O. Box 907
Albany, Oregon 97321
503 926-7771

February 29, 1988

Honorable Ron Wyden
U.S. House of Representatives
1406 Longworth House Office Building
Washington, DC 20515-3703

Dear Congressman Wyden:

It is my understanding that as Chairman of the House of Representatives' Small Business Subcommittee on Regulations and Business Opportunities, you have scheduled a hearing for March 8 to discuss what effect the signing, January 2, 1988, of a Free Trade Agreement between Canada and the United States will have on U.S. manufacturers (small and large) of plywood if ratified by the Canadian Parliament and the United States Congress.

The FTA will eliminate tariffs on both Canadian and U.S. plywood but unfortunately, Canada maintains nontariff barriers that protects its plywood markets. My primary concern is that the Canadians have significantly different product standards and building codes creating differences in product acceptance and these differences must be eliminated before the tariff reductions are eliminated.

Canada has argued that the quality of U.S. plywood is not adequate for their climate. This does not hold up under scrutiny since plywood manufactured in the U.S. to APA product standards has performed well under similar conditions, if not more extreme, in Alaska. Without a resolution to this dilemma, the Canadian plywood producers will have access to our markets while the majority of the Canadian construction plywood market will remain closed to U.S. manufacturers.

I urge you and your committee to support a resolution to this problem on non-tariff barriers before the ratification of this agreement.

Thank you.

Sincerely,

Floyd Vike
Vice President

FV:em

cc: Bill Robinson - American Plywood Association
P.O. Box 11700
Tacoma, WA 98411
CATHY BALDWIN

WINSTON & STRAWN
SUITE 500
2550 M STREET, N.W.
WASHINGTON, D.C. 20037
202 828-8400
TELEX 6971734
TELECOPIER 202 828-8473

FREDERICK H. WINSTON (1853-1886)
SILAS H. STRAWN (1891-1946)

CHICAGO OFFICE
ONE FIRST NATIONAL PLAZA
CHICAGO, ILLINOIS 60603
312 558-5600

PHOENIX OFFICE
3200 NORTH CENTRAL AVENUE
GREAT AMERICAN TOWERS, SUITE 2300
PHOENIX, ARIZONA 85012
602 279-8500

TUCSON OFFICE
WILLIAMS CIRCLE, SUITE 600
5210 EAST WILLIAMS CIRCLE
TUCSON, ARIZONA 85711
602 747-8901

U.S./CANADA FREE TRADE AGREEMENT

PLYWOOD STANDARDS

COMMENTS OF THE PLYWOOD INDUSTRY MEMBERS OF THE COUNCIL OF FOREST INDUSTRIES OF BRITISH COLUMBIA

MARCH 23, 1988

SUMMARY OF COMMENTS ON THE PLYWOOD STANDARDS OF THE FTA
PLYWOOD INDUSTRY MEMBERS OF THE
COUNCIL OF FOREST INDUSTRIES OF BRITISH COLUMBIA
March 23, 1988

1. The Canadian plywood market is generally closed to the U.S. because of a 15 percent tariff, not because of any standard.

2. Canadian building code standards applicable only to construction sheathing are the only barrier claimed by the APA.

3. Two-thirds of the Canadian market for plywood is not governed by any building code and is fully open to U.S. C-D plywood today.

4. The remainder of the Canadian panel market that is subject to building code standards could be fully supplied by U.S. plywood if U.S. producers merely graded the better quality C-D grade plywood to Canadian construction sheathing standards.

5. A recently approved Canadian plywood performance standard, that will likely be adopted by the building codes in 1991, allows southern pine. Southern pine is not now allowed under the Canadian product standard because no one, including the APA, ever requested that it be considered as a permitted species.

6. The Canadians expect that by the end of 1989 their performance standard will have a performance test for bonding that will replace the present defect size limitation. The U.S. will have ample time to determine the application of the new performance standard to U.S. plywood before the U.S. plywood tariff drops sufficiently to no longer constitute a major barrier to imports.

7. The purpose of the Canadian building code standards is not to exclude U.S. plywood. The tariff already accomplishes this and building code standards are ineffective barriers as they do not apply to two-thirds of the market and can be easily complied with as to the remainder. The Canadian procedures for determining building code standards are fair, open to the APA, and not controlled by the Canadian plywood industry. The existing standard is supported by Canadian experience and both Canadian and APA studies.

8. The Canadian plywood industry does not now and has never justified its construction sheathing standard on the basis of harsher Canadian weather. The standard does, however, recognize that: 1) many homes under construction in Canada have exposed roof and floor sheathing when construction activities are delayed; 2) the panels are exposed to rain over this period, and during shorter periods when construction is in progress; and 3) that excessive delamination of panels is more likely to occur if the veneers of the plywood contain defects over 2 inches.

9. Reduced standards for Canadian plywood will reduce plywood performance and lose market share to non-plywood wood panels.

U.S./CANADA FREE TRADE AGREEMENT
PLYWOOD STANDARDS
COMMENTS OF THE PLYWOOD INDUSTRY MEMBERS OF THE COUNCIL OF FOREST INDUSTRIES OF BRITISH COLUMBIA

March 23, 1988

I. Introduction

The dispute about the differences between Canadian and U.S. plywood standards is longstanding. In the Tokyo Round of GATT negotiations, the U.S. and Canada agreed to reduce their plywood tariffs if satisfactory progress could be made on developing a common North American plywood standard. However, an evaluation by the plywood industries of both countries in 1981 resulted in their agreement that there was "no economically viable ground for the development of a common set of [plywood] standards for the two countries". Subsequent development of U.S. and Canadian plywood performance standards were seen by the two industries as the best way to resolve this problem. The Canadians expect to complete their performance standard in time for inclusion in the next version of the Canadian building code in 1990.

The U.S./Canada Free Trade Agreement (FTA) provides for the reduction over 10 years of U.S. and Canadian tariffs on plywood (currently 20 percent in the U.S. and 15 percent in Canada). It also requires that the Canada Mortgage and Housing Corporation (CMHC) will evaluate C-D grade plywood and decide whether to approve its use in housing financed by CHMC. The FTA provides that if CMHC approval is not granted, the tariff reduction will not begin until the CHMC evaluation is reviewed by "an impartial panel of experts acceptable to both parties." If the panel agrees that the CHMC evaluation is unbiased and technically accurate, the tariff reductions will begin. If the panel does not agree with CHMC, the U.S. may delay its plywood tariff reductions, in which case Canada may also delay its tariff reductions.

The CHMC recently completed its evaluation of U.S. C-D grade plywood and was unable to accept its use in CHMC financed housing on the basis of the evidence submitted to it. It recommended continued work on a performance standard as the solution to the problem of inconsistent U.S. and Canadian plywood standards.

On March 15 the APA urged the U.S. Government to delay the tariff reductions without even proceeding with the bilateral review process contained in the FTA "until such time as the standards issue between the U.S. and Canada is satisfactorily resolved."

The APA's objective thus appears to be either to prevent the tariff reductions or to use the FTA as a weapon to convince Congress to force Canada to reduce its standards for construction sheathing grade plywood.

In pressing its case, the APA has made several factual misstatements, three of which are particularly eggregious and which are known by APA to be wrong.

1. The Canadian market is closed to U.S. by Canadian plywood standards;

2. The purpose of the Canadian construction sheathing standards is to exclude U.S. plywood from Canada; and

3. Canada's justification for its stricter standards is its harsher climate.

Each of these claims is totally unfounded.

II. The Canadian Plywood Market Is Not Closed To U.S. Plywood

A. Two-Thirds of Canadian Market Totally Open To U.S.

There is no significant plywood trade between the U.S. and Canada today because of high tariffs in both countries, not because of any nontariff barrier to trade. The tariffs, 20 percent in the U.S. and 15 percent in Canada, prevent trade in plywood except in unusual circumstances. Trade in plywood only occurs between the U.S. and Canada when relative price differences in the two countries are sufficient to overcome the tariff levels, or when there is a plywood industry strike in either country.

Although the impression it creates is that the entire Canadian plywood market is closed to U.S.producers, the APA is only claiming that the Canadian construction market is closed. APA is only objecting to Canadian building code standards for construction sheathing, which is used for roofs and floors in buildings.

However, two-thirds of the Canadian market for plywood is not construction sheathing, is therefore not subject to such code standards, and is now fully open to U.S. plywood, including U.S. C-D grade plywood.

In 1987, 2.7 billion square feet (calculated on a 3/8 inch basis) of wood panel was used in Canada: 1.9 billion of plywood and .8 billion of waferboard and oriented strand board. Of the 2.7 billion sq.ft. of wood panel, at most 1 billion sq.ft. was used for construction sheathing. Thus, only 37 percent of the total Canadian market for wood panels such as plywood is subject to Canadian building codes. The other 63 percent is not subject to the building codes that the APA claims close the Canadian plywood market to U.S. producers.

The 63 percent that is not subject to any Canadian code standard requirement is used for: home use, industrial uses (such as shipping containers), construction area barriers, other miscellaneous temporary structures, concrete forms, and cabinetry.

B. Remainder of the Canadian Market Open If The U.S. Grades to Canadian Standards

The U.S. plywood industry could probably supply the entire Canadian construction sheathing market with plywood that meets the Canadian sheathing standards today (and could supply it several times over once the new Canadian performance standard that permits southern pine is adopted by the building codes). This could be done by simply grading its better quality C-D panels (those veneers with defects between 1.25 and 2 inches), which meet the Canadian standard, for use in Canadian construction sheathing.

Canadian sheathing grade plywood panels must have at least Canadian C grade veneers, which allow maximum defects of 2 inches. U.S. sheathing grade plywood may contain interior veneers with maximum defects between 1.25 and 3 inches (the D grade veneers). A substantial portion of U.S. C-D grade plywood in fact has veneers with defects below 2 inches. These panels could be graded upon manufacture as meeting Canadian C grade standards.

Some U.S. manufacturers do this today and sell in the Canadian construction market, despite the high tariff, either during strikes in Canada or when the Canadian price is sufficiently higher than the U.S. price to overcome the tariff. It does not involve a substantial increase in cost to grade to Canadian standards.

Grading to the Canadian standard only requires that the grader not only distinguish between veneers with defects under 1.25 inches (U.S. C grade) and veneers with defects over 1.25 inches but under 3 inches (U.S. D grade), but also distinguish those with defects over 1.25 inches and up to 2 inches (Canadian C grade).

It has been estimated that between 20 and 65 percent of U.S. CD grade plywood has veneer with maximum defects under 2 inches, and would therefore meet Canadian sheathing grade standards.

The 65 percent estimate was made by the director of the Technical Services Division of the APA. The APA has also stated in testimony before Congress that over 70 percent of U.S. plywood production is C-D grade plywood.

However, even using the 20 percent estimate would result in 3.2 billion square feet of U.S. plywood meeting Canadian standards for construction sheathing (20 percent of 70 percent of the 23 billion square foot U.S. 1987 plywood production). This is more than the Canadian construction sheathing market, and indeed is more than the entire Canadian market for wood panels for all uses.

The U.S. produces more plywood that meets Canadian construction sheathing standards than does Canada. Once the new Canadian performance standard which allows southern pine is adopted by the Canadian building codes, all of this plywood could be used in Canadian construction.

C. New Canadian Performance Standard

In 1981, after an attempt to harmonize their product standards, both the U.S. and Canadian plywood industries agreed that their grading systems could not be economically harmonized because of fundamental differences in the structures of their respective standards and code systems. In 1985, Canadian panel industry representatives, with the urging of the the American Plywood Association, officially proposed a plywood performance standard that could bridge the gap between the two countries' systems.

In January 1988, the Canadian Standards Association approved a performance standard, which will be published in April. It is expected that this standard will be adopted by the National Building Code of Canada (NBCC) in 1990 and adopted by the provinces no later than 1991. It is possible that a province may adopt the new performance standard even before it is incorporated into the new NBCC standard.

This new Canadian plywood performance standard is complete except that it contains an interim glue bonding requirement based on defect size in the Canadian plywood product standards (2 inches) rather than a glue bonding performance test. The U.S. also has developed a performance standard, and it too does not contain a performance test for bonding and continues to specify bonding requirements in terms of the maximum defect size in its product standard (3 inches).

It is expected that the durability performance test for glue bonding will be completed by the end of 1989, in time for its inclusion with the rest of the performance standard in the next edition of the NBCC.

The Canadian performance standard with a glue bonding performance test will be completed before tariffs have been reduced significantly. By January 1, 1990, the U.S. tariff is scheduled to be reduced to 16 percent, not likely to be low enough to allow any significant importation of Canadian plywood to the U.S.

D. New Performance Standard Allows Southern Pine

The new Canadian plywood performance standard contains no restrictions by species type. It therefore will permit southern pine plywood otherwise meeting the performance standard's requirements.

Southern pine is not now accepted under Canadian building code standards because no one ever requested that it be included in the standards. All of the species that are included were requested to be included by some organization. Since southern pine is not grown in Canada, no Canadian requested its inclusion. Although the APA or any U.S. plywood interest could have requested that southern pine be included, such request was never made.

III. The Purpose of Canadian Building Code Standards For Plywood is Not To Exclude U.S. Plywood

A. Canadian Code Restrictions Not To Exclude U.S. Plywood

As discussed above, the present 15 percent Canadian tariff on U.S. plywood is sufficient to keep U.S. plywood out of Canada except in unusual circumstances when relative price disparities between the U.S. and Canada are sufficient to overcome the tariff. The tariff long preceeds the establishment of the Canadian plywood standard.

Also as discussed above, two-thirds of the Canadian market is not subject to any building code requirement and the U.S. plywood industry could supply the entire Canadian plywood market by grading its better quality C-D grade plywood to Canadian standards.

The APA evidentally wants Congress to believe that somehow the Canadians anticipated the reduction of tariffs by the FTA and established plywood standards in 1978 to take the place of tariffs to keep U.S. construction sheathing out of Canada -- a clairvoyance which evidently did not extend to the futility of establishing standards which would provide absolutely no protection for two-thirds of the Canadian market and virtually none for the remainder.

B. Canadian Code Standards Are Legitimate Regulation

The Canadian plywood standards and related building code provisions have been determined on the basis of technical merit under fair procedures open to the APA and not under the control of the Canadian plywood industry.

1. Canadian Building Code Procedures

- In order to be used as sheathing for the roof or floor of a building in Canada, plywood must meet the applicable Provincial building code (just as buildings in the U.S. must meet state or local building codes). The Provinces adopt building codes, but have delegated enforcement to the municipalities.

- The Provinces routinely adopt as their building codes the National Building Code of Canada (NBCC), although sometimes with changes to either stiffen or relax various standards in the NBCC. In the case of plywood, the provinces have adopted without change the most recent version of the NBCC (and before that the 1970, 1975, 1977, 1980, and 1985 versions).

- The NBCC adopts standards for materials, such as plywood, and specifies construction practices for such materials. In the case of plywood, this means specifying the minimum span widths between joists based on the thickness of the panel for any plywood meeting a standard issued by the Canadian Standards Association.

2. Canadian Standards Procedures

The plywood standards are issued by the Canadian Standards Association (CSA), a private nonprofit organization. CSA standards are developed under the following procedures:

Anyone, including U.S. plywood companies or their trade association, may request that the CSA plywood standard be modified to include a species not presently specified or a defect size not permitted. Such requests should be supported by material justifying the change, i.e., that the panel would have sufficient structural strength and durability.

The Technical Committee on Coniferous Plywood ("Plywood Committee") is the product standards committee with jurisdiction over 98 percent of Canadian plywood and initially rules on such requests. The Plywood Committee is not controlled by the plywood industry. It has four categories of members and and no one category may represent a majority on the committee. The categories are:

a. producers of plywood;

b. users (principally homebuilders and building supply dealers);

c. regulators (including the Canadian Home Warranty organization); and

d. representatives of the general interest (such as consumer groups and research organizations).

When the Committee is at full strength, less than one third of its members will be from the plywood industry.

After a CSA product standards committee approves a standard, CSA's Steering Committee must approve it, but this is generally pro forma.

The National Building Code of Canada (NBCC) then may reference the CSA standard. The NBCC is produced under the auspices of the National Research Council, a Canadian Federal Government organization. However, the only function of the NRC is to provide the services of a secretariat; it has no decisionmaking power. It does not even promulgate or enforce the fair procedural rules for committee actions, which functions are accomplished by a committee of the NBCC.

The NBCC committee responsible for the portion of the NBCC involving construction sheathing is not controlled by the plywood industry. It has 25 members including, home builders, local and provincial building officials, home warranty program officials, architects, engineers, and technical experts (including some from various construction materials manufacturers, including one person from the wood products industry (who is not from a plywood company). These technical experts are on the committee solely for their technical expertise and not to represent their industry.

C. CSA's Plywood Standards Are Appropriate

1. Background: U.S. and Canadian Standards

Plywood panels consist of veneers, usually 1/8 inch thick, that are glued together under pressure and heat with the grain running at right angles on alternate veneers. Both the U.S. and Canada have standards for plywood panels and for the veneers that make up such panels. The higher grades of plywood panels are essentially interchangeable between the U.S. and Canada and are not subject to Canadian building codes. The lower panel grades are used for sheathing grade plywood (covering of roofs and floors of buildings).

The Canadian sheathing standard requires that no veneer be less than Canadian C grade; the U.S. standard requires a U.S. C grade veneer on one face and allows U.S. D grade veneer in the interior and other face. There are many specifications in the Canadian and U.S. grading systems, but the most important is the maximum size of defects, such as knots or knot holes.

- Canadian C grade veneer allows a maximum defect size no larger than 2 inches across;

- U.S. C grade veneer allows a defect no more than 1.25 inches across; and

- U.S. D grade veneer allows a defect no more than 3 inches across.

Plywood graded to Canadian sheathing standards does not meet U.S. building codes, which adopt the PS1 standard issued by the Department of Commerce. This is because the U.S. standard requires a face veneer of U.S. C grade (with a maximum defect of 1.25 inches) while Canadian sheathing has only Canadian C grade (with a maximum defect of 2 inches). To sell Canadian plywood for use as construction sheathing in the U.S. therefore requires that the Canadian producer grade the plywood to U.S. standards, using only the better Canadian C grade veneers (those with maximum defects of 1.25 inches). In the alternative, the Canadian producer may join the APA and seek an APA performance rating for his plywood.

Similarly, U.S. sheathing does not meet Canadian building codes. This is because this Canadian standard allows no veneer lower than Canadian C grade (maximum defect 2 inches) while U.S. sheathing has U.S. D grade veneers (maximum defect 3 inches). Also similarly, the U.S. producer can grade his better quality D grade veneers (those with maximum defects less than 2 inches) to Canadian standards.

2. Determination of Canadian Standards

In 1978, when Canada established its current product standards for plywood, it evaluated defect sizes and determined that the U.S. C grade (maximum 1.25 inch defects) was too stringent for construction sheathing, but that U.S. D grade (maximum 3 inch defects) was too loose and would result in an unacceptable number of justified consumer complaints about the lack of durability.

These problems would result from situations where the D grade plywood was at the low end of the grade (defects between 2 and 3 inches) and the plywood had been rained on before it was covered with tarpaper. Under some circumstances, the panel could delaminate (the glue bond of adjacent veneers could break), causing a substantial localized reduction in panel strength.

In 1978, the CSA Plywood Committee was urged to allow larger defects by plywood producers who anticipated the possibility of producing such plywood. However, the homebuilders and other Committee members decided that although U.S. C grade (1.25 inch maximum defects) was too strict, U.S. D grade (3 inch maximum defects) was too lax and would result in excessive consumer complaints and consequent repair costs. Accordingly, the Committee determined that the appropriate standard for sheathing should have a maximum defect size of 2 inches.

3. Evidence Supporting The Canadian Standard

In a September 1986 report of the Quality Services Division of the American Plywood Association, delamination was examined for various defect sizes. (Please see the attached "Study to Evaluate Glue Bond Quality of Exterior Plywood Panels Utilizing Lower Than "C" Grade Veneers.") The results of this testing show that there was no significant delamination with defects below 2 inches and that the amount of delamination increased exponentially with defect sizes above 2 inches. When defect sizes were increased from 2 inches (the present Canadian C grade) to 3 inches (the present U.S. D grade), the square inches of delamination increases by a factor of from 6 to 20 times. (See Table 2 in the attached Study.) The study reached the conclusion that

> "The data indicate no problems with knots up to 2" across with an increase of 2-1/2" in serious question. Larger knots, both 3" and 4" across the grain, resulted in significantly greater delamination." (See page 8.)

IV. Plywood Standards For Construction Sheathing Not Based on Harsher Weather In Canada

The Canadian plywood industry does not now and has never justified its construction sheathing standard on the basis of harsher Canadian weather.

The APA appears to have successfully created this straw man by repeating this false claim in press releases and in its testimony before Congress. It appears that Congressman Ron Wyden (D-OR) and Senator Bob Packwood (R-OR) have been misled by APA's statements to believe that Canada has made this claim. It has not. In addition, the Bureau of National Affairs Daily Report for Executives has even gone one step further and stated without grounds that the CMHC "rejected U.S. plywood on the grounds that its C-D grade laminations might not weather Canada's harsh winters." This is simply not true and is gross error.

The Canadian standard is based on experience and testing in Canada, and considers all the relevant factors bearing on the performance of plywood that is unprotected during construction. There is no separate standard in Canada for plywood that is protected at all times. Therefore, the standard must recognize that: 1) many homes under construction in Canada have exposed roof and floor sheathing when construction activities are delayed; 2) panels may be exposed to rain over this period, and during shorter periods when construction is in progress; and 3) that excessive delamination of panels is more likely to occur if the veneers of the plywood contain defects over 2 inches.

The Canadian plywood industry's major concern regarding reduced standards for plywood is the potential loss of the wood panel market to non-plywood panels. Canadian plywood producers fear that this would occur because of the poor performance of plywood with the large defects allowed the U.S. C-D Grade plywood.

A STUDY TO EVALUATE GLUE BOND QUALITY OF EXTERIOR PLYWOOD PANELS UTILIZING LOWER THAN "C" GRADE VENEERS

by

T. Joseph Patterson
Robert C. Raymond
Carl M. Erb, Jr.

Quality Services Division
American Plywood Association

September 1986

ABSTRACT

A comprehensive gluing study was conducted by the American Plywood Association Quality Services Division laboratory staff to determine the effects on bond quality of increasing the size of currently allowed "C" grade veneer defects in Exterior plywood panels. Defects studied were solid knots, knotholes, voids and splits in panel backs and solid knots in inner plies, all in different size increments. Four species were included in the study on backs and two in the study on inner plies.

Test specimens were subjected to a cyclic delamination test and the delamination resulting was compared to that obtained with presently permitted defects of the same type.

The study showed that, with certain limitations, the size of all back defects excepting voids and the size of solid knots in inner plies could be increased without adverse effect on bond quality. Effects, if any, on panel strength properties or marketplace acceptance were not evaluated in this study.

A STUDY TO EVALUATE GLUE BOND QUALITY OF EXTERIOR PLYWOOD UTILIZING LOWER THAN "C" GRADE VENEERS

BACKGROUND

At the Industry Standards Committee meeting October 14-15, 1980, a proposal was received from a manufacturer to modify the grade of backs on Decorative Exterior plywood panels used as siding and other Exterior grades currently utilizing a "C" grade back.

The manufacturer stated that such a change was needed both to improve the utilization of available logs and to release some of the existing "C" grade veneer for use in higher value products. Satisfactory field experience with a proprietary siding panel containing lower grade backs was cited.

The proposal was to permit a modified "D" grade for back veneers in Exterior panels with four or more plies. After discussion, it was agreed that a subcommittee be formed to study the question and their charge was expanded to include study of three-ply panels with such backs as well.

The subcommittee met the next month and further defined the scope of the study. Primarily it was seen as a question of bond durability related to the proposed use of larger solid knots, knotholes, splits and voids in panel backs, but the study was further expanded to include bond durability related to the use of larger solid knots in the inner plies of all Exterior panels other than siding. On the basis of results from earlier studies, the use of knotholes or voids in inner plies larger than presently permitted in "C" grade veneer was not considered. The effect of grooves in siding panels which coincided with voids in the panel back was to be studied as well as the effect of superimposing of defects. Various commonly used species or combinations of species were to be included.

The subcommittee originally also proposed that a modification of face grade in C-D sheathing panels bonded with exterior glue be studied. However, since such panels already use "D" grade veneer bonded to "D" grade veneer, no additional bonding problems could be foreseen simply by using another "D" grade ply. A number of plywood manufacturers have since qualified D-D sheathing panels under the performance-rated program and problems with glue bond or concentrated load at panel edges, another subcommittee concern, have not materialized.

A study plan was drafted by the Quality Services Division staff, reviewed by the QSD Advisory Committee and submitted to the Standards Committee for comment in August 1981. Since only favorable comment was received, veneer and adhesive needs were determined and veneer acquisition commenced the following May. Arrangements were made to obtain veneer of each thickness within each species from at least two sources to reduce the potential for bias because of peeling or drying practices.

STUDY PLAN

For convenience, the study was divided into two parts: the "siding" study, which considered the bond durability effects of increasing the size of grade characteristics on panel backs; and the "sanded" study, which considered the bond durability effects of increasing the size of solid knots in inner plies.

The project design called for the manufacture in the laboratory of 10 panels from each defect type/size/panel construction/species combination in both siding and sanded groups, including in all cases the maximum size defect permitted under current "C" grade rules as a baseline for comparison.

The choice of veneer thicknesses used for each panel thickness was dictated primarily by availability and varied by species. For example, 1/8" cedar was not available so 1/10" was used along with 1/6" hemlock or white fir crossbands.

Listed below are the variables included in the siding and sanded studies.

A. **Siding Study Variables**

1. Grade Factors (backs only except as noted. See Table 2).

   a. Solid knots 1-1/2", 2", 2-1/2" and 3" across the grain.
   b. Knotholes 1-1/2", 2", 2-1/2" and 3" across the grain.
   c. 5-ply panels with 1-1/2" wide, 5/16" deep grooving over 1-1/2", 2", 2-1/2" and 3" knotholes in the back.
   d. Knotholes 1-1/2", 2", 2-1/2" and 3" across the grain superimposed over 1-1/2" knotholes in crossband adjacent to back.
   e. Voids 1-1/2" x 6", 2" x 6", 2-1/2" x 6" and 3" x 6".
   f. Splits 1/2", 1" and 1-1/2" in width by the panel length.

2. Panel Construction and Species (See Table 1)

   a. 3/8" - 3 ply. Three plies of 1/8" for Douglas-fir, southern pine and larch panels. Cedar panels made with 1/10" western red cedar face and back and 1/6" hemlock or true fir crossbands.

   b. 1/2" - 4 ply. Four plies of 1/8" for Douglas-fir, southern pine and larch panels. Cedar panels made with 1/10" western red cedar face and back and two 1/6" hemlock or true fir crossbands.

   c. 5/8" - 5 ply. Five plies of 1/8" for Douglas-fir, southern pine and larch panels. Cedar panels made with 1/10" western red cedar face, back and center and 1/6" hemlock or true fir crossbands.

      Note: Larch panels were included only in that portion of the study dealing with solid knots in panel backs.

   Panel construction and species are shown in Table 1. The placement of defects within each panel type is indicated by diagrams. The sizes of defects in each panel construction are indicated in the two left-hand columns of Table 2.

B. **Sanded Study Variables**

1. Grade Factors (Inner plies only. See Table 4)

   a. Solid knots 1-1/2", 2", 2-1/2", 3" and 4" across the grain in centers only of 5-ply panels.

   b. Solid knots 1-1/2", 2", 2-1/2", 3" and 4" across the grain in centers only of 5-ply panels, each superimposed over a 1-1/2" knothole in an adjacent crossband.

c. Solid knots in crossbands only of 3-, 4-, and 5-ply panels with those in 4- and 5-ply panels superimposed. Knot sizes are 1-1/2", 2", 2-1/2", 3" and 4" across the grain.

d. Solid knots 1-1/2", 2", 2-1/2", 3" and 4" across the grain in crossbands and centers of 5-ply panels each superimposed over the knot of the same size in the adjacent veneer.

2. Panel Construction and Species (See Table 3)

   a. Three-ply panels (solid knots in crossband only). Douglas-fir - 5/16" (three plies of 1/10" veneer). Southern pine - 7/16" (1/8" face and back, 1/6" crossband).

   b. Four-ply panels (solid knots in crossbands only). Douglas-fir - 9/16" (1/10" face and back, 3/16" crossbands). Southern pine - 9/16" (1/8" face and back, 1/6" crossbands).

   c. Five-ply panels (all grade factor categories). Douglas-fir - 13/16" (1/8" face and back, 3/16" crossbands and center). Southern pine - 13/16" (five plies of 1/6" veneer).

   Panel construction and species are shown in Table 3. The placement of defects within each panel type is indicated by diagrams. The sizes of defects in each panel construction are indicated in the two left-hand columns of Table 4.

MATERIAL

Veneer

Veneer used in this project was donated by mills producing veneer of the required species and thickness. Designated mill staff and APA Quality Supervisors selected the veneer and shipped it to the laboratory where it was cut into 12-inch by 12-inch squares. These squares were sorted into 3 groups -- clear, solid knots and knotholes.

Clear squares were free of pin knots, burls or pitch pockets, as well as unusual roughness, thickness variation or severly distorted grain.

Grade characteristics were located in the center of 12-inch by 12-inch squares of veneer. The limitations for clear veneer apply here except distorted grain was permitted only where it was a characteristic associated with knots or knotholes.

Knot and knothole dimensions were measured across the grain. The limit of the knot diameter was determined using the definition given in ASTM D9-76 Standard Definitions of Terms Relating to Wood, Appendix 1, "The Size of a Knot."

Splits with parallel sides were made in clear veneer squares by removing a piece of veneer of the required width parallel to the grain.

Voids were made by routing a hole of the required size in a clear square of veneer with the main axis of the void parallel to the grain.

All veneers were stored in a conditioning cabinet to control moisture content to 3 to 5 percent.

Some of the larger solid knots and knotholes called for in the study plan were not available in cedar or Douglas-fir. Specifically, cedar 3" knotholes and solid knots in the siding study and Douglas-fir 4" solid knots in the sanded study were not obtained in a quantity sufficient to fill all the requirements of the plan. In some cases, it was possible to adjust test data to compensate but in others, individual cells of data are blank.

In addition, it should be noted that most of the large solid knots in larch veneer in the siding study were actually "compound" knots made up of groups of smaller knots in close proximity to each other. This is a natural growth characteristic of the species.

Adhesives

Two approved exterior adhesives and schedules were used for this experiment. One adhesive was approved for producing southern pine plywood and one approved for western producers to make plywood of Douglas-fir, western red cedar and western larch. The adhesive suppliers' instructions for mixing, spreading, assembly time and pressing were carefully followed. Optimum gluing conditions were used for each combination of species and panel construction as noted in Table 5.

PANEL MANUFACTURE

The experimental design called for 10 panels of each combination of species, construction, grade characteristic and characteristic size. (See Tables 1, 2, 3 and 4.)

Squares of veneer were assembled into the required panel construction without adhesive. The grade characteristics were centered in the panel at the specified location - back, crossband, center or combination of these. The "dry-layups" were stored under equilibrium moisture content conditions of 3 to 5 percent.

Adhesive was applied to the veneer using the laboratory roller glue spreader. At the appropriate time, the panels were inserted one per opening in the three-opening steam-heated laboratory hot press and were pressed at the recommended time, temperature and pressure shown in Table 5.

Panels were placed in an insulated, preheated box immediately following pressing and left overnight to simulate the hot-stacking period used in plywood plants to complete adhesive polymerization.

TESTING

The influence of a grade characteristic on bond quality was determined by the amount of delamination which developed in the gluelines of test pieces as a result of laboratory test cycles. Such a procedure has several advantages over the use of conventional plywood shear specimens for evaluating the effect of the characteristics studied: (1) bond quality may be assessed over the entire area affected by the characteristic and in more than two gluelines at the same time, and (2) accurate wood failure readings cannot be obtained from test areas including knots, knotholes and voids.

Each 12" x 12" panel was sawn so the cut passed through the center of the main axis of the characteristic. A 2" x 6" test specimen was then cut from each half of the panel so that the characteristic was centered on one edge of the piece, as illustrated in Figure 1.

These specimens were subjected to 10 boil-dry cycles with two cycles conducted each day for 5 days. The first cycle each day consisted of placing the specimens in boiling water for one hour followed by forced air drying in an oven at 180°F for six hours. The second cycle consisted of one hour of boiling followed by 16 hours of drying at 180°F.

The cyclic test procedure was selected in a preliminary series of evaluations for its ability to produce delamination in gluelines with known low bond quality and in low pressure areas. While the procedure has not been correlated to outdoor exposure, for the purposes of this study it is important only that it be capable of distinguishing differences in bond quality between what is already accepted and what is being examined as an alternative.

Following the completion of the 10 boil-dry cycles, specimens were probed for delamination using the probe described in paragraph 4.3 of PS 1-83. The area of all delaminations 1/4" in depth by 1" in length or more was calculated and totalled for each glueline, each test specimen and each defect type/size/construction/species combination. In order to eliminate the possibility of differences in evaluation technique, all delamination probing and measuring was conducted by the same technician.

RESULTS AND ANALYSIS

General

Results from the study have been summarized and are presented in Tables 2 and 4. Columns in the tables list the constructions (3, 4 or 5 ply), the characteristic sizes (1/2" to 3" for siding and 1-1/2" to 4" for sanded), followed by columns showing the total delamination observed for that characteristic for each size category combining all species. Absence of data in any column indicates no panels were made including that characteristic in that construction. In Table 2 for example, only 5-ply siding panels were made with a knothole in the back and a 5/16" x 1-1/2" groove in the face:. three- and four-ply panels were not made. Table 4 presents data from the "Sanded" portion of the study and is organized in a similar manner. The last row of values in the tables "Panels / No." indicates the total number of panels represented in each construction/characteristic/size category.

Results were analyzed by comparing delamination associated with presently permitted "C" grade defects to delamination associated with proposed larger defects of the same type. For example: in the category of a knothole in the back of a 3-ply panel, the total delamination found in specimens containing 1-1/2" knotholes was compared to the total delamination measured in each other defect size (2", 2-1/2" and 3" widths). This comparison was repeated for each defect category, species, and panel construction combination. In addition, the comparisons were repeated with species combined. Combined delamination values are shown in Tables 2 and 4.

In many of the defect category/size comparisons it was obvious whether or not the delamination associated with the larger defect size was significantly greater than the delamination measured for the currently accepted "C" grade size. In some cases, it was not so clear cut. In these situations, statistics were applied in the form of the Students "t" test to determine whether or not the differences were statistically significant.

Siding Study

Back Knots. Considering first the siding portion of the study with species combined, the first column of delamination data (Table 2) covers knots in the back. Panels were made in all three constructions with knot sizes ranging from 1-1/2" to 3". Results in Table 2 indicate there is only slight increase in total delaminated area as knot sizes are increased through the 3" size. Analysis by the Students "t" test confirms the lack of significance when each construction is examined separately. However, when constructions are combined, the 1-1/2" versus 2-1/2" comparison is slightly significant while neither the 2" nor 3" compared to the 1-1/2" knots is significant. This apparent inconsistency results strictly from the distribution of delamination data specimen-to-specimen within knot sizes and does not reflect on actual difference between sizes. From a practical viewpoint, it can be disregarded.

Back Knotholes. The category of knothole in the back is shown in the second column of data in Table 2. It is clear that delamination measured in 3" knotholes is significantly greater than that measured in 1-1/2" knotholes in all three constructions. However, the difference between 1-1/2" and 2-1/2" knotholes is not so clear cut. There is no difference between 1-1/2" and 2-1/2" in 5-ply panels. The difference in 4-ply panels showed no significance between 1-1/2" and 2-1/2" knotholes when each species was analyzed separately. However, when species were combined, a significant "t" was obtained. Since total delamination associated with 2-1/2" knotholes was only 1.9", however, this cannot be construed as an important difference in delamination rate. When 1-1/2" knotholes were compared to 2-1/2" in 3-ply, the increase in delamination was significant in both fir and southern pine separately and when combined.

Back Knothole/Face Groove. The category of knothole in the back and a 5/16" x 1-1/2" groove in the face was only made in 5-ply. Delamination for this characteristic is shown in the third data column in Table 2. There is little question that the 2-1/2" knothole in the back with 20.8 sq. in. total delamination is significantly worse than the 0 delamination seen with 1-1/2" and 2" knotholes. At first this seems rather strange since both the 2-1/2" and 3" knotholes in the back showed considerably more delamination in specimens with the groove in the face than in specimens without the groove. Both sets of panels were manufactured under identical conditions with the groove cut into one set of specimens after pressing. It is possible that the groove relieved some of the restraint of movement during cycling so that the grooved specimens experienced more expansion and contraction at the remaining gluelines close to the knothole, resulting in a greater degree of delamination in specimens with the larger knotholes.

Back Knothole/Core Knothole. The next category, knothole in the back with a 1-1/2" knothole in the coreline adjacent to the back, is compared in the fourth data column of Table 2. Three, four and five-ply constructions were studied. There is no question about the significance of the difference in delamination between 1-1/2" and 3" knotholes or the lack of significance when comparing 1-1/2" to 2" knotholes. Even though the Student "t" test indicates a significant difference in delamination when 1-1/2" and 2-1/2" knotholes are compared in two of the three constructions, individual species comparisons indicate significance in only two of the nine comparisons. It is very unlikely that the 2-1/2" knothole in the back when superimposed over a 1-1/2" knothole in the adjacent coreline would, in the absence of grooving, cause any serious problems in service. Nonetheless, a maximum limit of 2" on knotholes on panel backs would be a safer approach.

Voids, Splits. Trends in the remaining two columns in Table 2 are clear. Voids in the back should not exceed the currently allowed 1-1/2". Two inches is clearly too wide in two of the three constructions. Based on total delamination measured, splits in the back would not cause serious trouble if the maximum size were increased to 1-1/2", although a 1" maximum is obviously safer. There might be some objections raised on a purely appearance basis to 1-1/2" splits on backs.

Species Breakdown. Tables 6, 7, 8 and 9 show the siding study delamination data by species using the same format as Table 2. Delamination totals for 3" solid knots and knotholes in Tables 6-9 will not, in most cases, add up to the totals shown in Table 2. This is because data were adjusted to compensate for the shortage of 3" cedar knots and knotholes. A few minor anomalies will also be noted on Tables 6, 7 and 8 which were not as apparent in Table 2.

The data shown in Tables 6-9 would not alter the general observations noted above for Table 2. However, a few specific observations are of interest:

1. Solid larch knots in backs, regardless of size, were not associated with any delamination while at least some delamination was noted in all other species. This may be because the large knots were "compound" knots, as noted earlier, or it may be a true species effect.
2. There was somewhat less delamination, especially in 4- and 5-ply panels, in cedar than in Douglas-fir and southern pine as a result of knotholes and voids. This is most likely because the cedar back veneers are thinner (1/10" as opposed to 1/8") and because the wood of cedar is more compressible.
3. Southern pine panels, in general, showed more delamination than Douglas-fir as a result of low pressure areas associated with knotholes and voids.

Sanded Study

General. Study of defects in sanded panels was limited to 5-ply with the exception of panels with knots in the cores. The results of these tests, with species combined, are shown in Table 4. As with Table 2, the first two columns show the constructions and defect sizes. In this portion of the study, all defects were solid knots with the exception of the knot in the center over a 1-1/2" knothole in one coreline of a 5-ply panel. Delamination in all categories of solid knots was found almost exclusively in panels made with Douglas-fir veneer. It should be borne in mind when reviewing Table 4 data that as the number of plies containing defects increases, the hazard for delamination increases.

Center Knot. The first data column in Table 4 shows total delamination for knots in the centers of 5-ply panels with Douglas-fir and southern pine results combined. The data indicate no problems with knots up to 2" across with an increase to 2-1/2" in serious question. Larger knots, both 3" and 4" across the grain, resulted in significantly greater delamination.

Center Knot/Core Knothole. The second data column in Table 4 shows delamination results for 5-ply panels with a solid knot in the center superimposed over a 1-1/2" knothole in one adjacent coreline. Total delamination for the 1-1/2" solid knot over a 1-1/2" knothole was 18.6 sq. in. but there was no increase in the area delaminated through the 2-1/2" solid knot size. The 1-1/2" over 1-1/2" situation is permitted under the current rules. Both 3" and 4" solid knots resulted in significantly greater delamination.

Core Knot. The next category, a solid knot in the core, includes all three constructions and is shown in the third data column of Table 4. In the 3-ply construction, there is only one knot in the single coreline. In 4- and 5-ply, there are two corelines and, thus, two knots. These knots were superimposed in the study. Knots in the 4-ply panels were adjacent and knots in the 5-ply were separated by a clear center.

Delamination in the 3-ply was not significant for any knot size including 4", although 4" knots were all southern pine: no 4" Douglas-fir knots were available for this category. Aside from the differences in veneer and panel thickness, there appears to be no reason why solid knots in the core of 3-ply panels apparently bonded better than those in the center of 5-ply panels.

The 4-ply panels with two solid 1-1/2" knots superimposed showed 25.7 sq. in. delamination. Compared to delamination generally considered acceptable in other categories, this amount of delamination measured in a condition allowed under the current PS 1 rules would seem to be excessive. However, since each of the three gluelines has a solid knot adjacent, more delamination might reasonably be expected than in the categories discussed previously. Even though the odds of stacking two knots during panel manufacture appear to be less than 1 in 200, the combined species data indicate an increase in solid knot size where stacking is possible should be avoided.

In the 5-ply panels with a clear center separating the two superimposed knots, there was very little delamination where 1-1/2" knots were used (3.9 sq. in.). However, delamination associated with the 2" knots was 42 sq. in., significantly greater than that with 1-1/2" knots. The combined species data indicate that a solid knot size increase in both corelines of 5-ply panels could not be justified if they are superimposed. Again, the odds of superimposition are less than 1 in 200.

Center Knot/Core Knot. The final category in Table 4 is a solid knot in the center with solid knots superimposed in both corelines of a 5-ply panel. Delamination where three 1-1/2" knots are superimposed was 32 sq. in. This is sufficient delamination to indicate that stacking of solid knots in all inner plies of a 5-ply panel, while not likely to occur frequently (probably less than 1 in 3000), would be a condition to avoid. Delamination became significantly greater as a solid knot size increased through 3". The lack of delamination with 4" solid knots, which were in southern pine only, is an apparent anomaly since 4" pine knots did not bond as well in other categories of 5-ply panels studied.

Species Breakdown. Considering the solid knot portion of the study with species separated, we find over 96% of all delamination occurring in Douglas-fir, as mentioned earlier. Tables 10 and 11 show the sanded study delamination data by species using the same format as Table 4.

Douglas-fir delamination is noted in Table 10. Since most of the combined species delamination shown in Table 4 was from Douglas-fir, Table 10 contains no real surprises and supports the same analysis as detailed for Table 4.

It is, perhaps, worth noting that total delamination associated with superimposed 2" Douglas-fir knots in the core of both 4- and 5-ply panels amounts to only slightly over 1" per glueline per panel. Nonetheless, it was significantly greater in both instances than that associated with currently approved 1-1/2" knots.

Southern pine delamination is noted in Table 11. The data indicate that solid knots up to and including 3" across the grain bonded satisfactorily in all construction combinations. Solid southern pine knots 4" across the grain bonded satisfactorily in some construction combinations but less so in others. Where they were used superimposed over 4" knots in other plies, considerable distortion of the test specimens frequently occurred, even when delamination was minimal or non-existent.

DISCUSSION

Backs. As indicated, the siding study was directed toward an examination of the bond quality effects of increasing defect sizes on panel backs only. Solid knots on backs can affect bond quality on one glueline only whereas voids, including knotholes, in panel backs may influence bond quality in several gluelines, depending on the size of the void and the degree of bridging from intervening crossbands.

In this study it was clear that solid knots in panel backs up to 3" across the grain result in no consistent deterioration of bond quality when compared to 1-1/2" solid knots presently permitted in "C" grade.

An increase in the size of allowable knotholes in C grade backs from 1-1/2" across the grain to 2" across the grain can easily be justified based on the test data. A 2-1/2" knothole appears safe in some instances but is obviously not in others.

Voids in "C" grade backs due to missing wood, wane or at the ends of splits appear to already be at the maximum width which should be permitted. While the effects of void width are somewhat dependent on panel construction, an increase in width even to 2" would result in significantly higher delamination in 3- and 5-ply layups.

Some loosening of limitations on splits in "C" backs is justifiable based on delamination data. A reasonable limit might be a maximum 1" in width except, of course, where they occur within 1" of a parallel panel edge. In making a judgment on increasing split width limits for "C" grade backs, the following should be considered in addition to the bond quality effect:

1. "D" grade currently permits splits up to 1" wide by full panel length provided they taper to not over 1/16" in width at one end.
2. Splits have considerable visual impact.
3. In 5-ply grooved siding panels, increasing split width somewhat increases the chance that a split will coincide with a groove, thus leaving only one complete ply intact in that cross-section.

Inner Plies. The sanded study was directed toward an examination of bond quality effects of increasing solid knot sizes in inner plies only. The interpretation of the data derived is complicated by the wide differences in the apparent gluability of Douglas-fir and southern pine solid knots. It is clear that southern pine solid knots up to 3" in width bond as well as those currently permitted in "C" grade even if superimposed; by contrast, the largest Douglas-fir solid knot that could be justified is 2-1/2" in width and then only if two or more solid knots of that size are not superimposed in any ply. As noted above, however, the odds of such superimposition or "stacking" occurring are slight.

In a Product Standard which encompasses a large variety of species, grade limitations related to gluing are necessarily driven by the species with the least gluable grade characteristics. Since only the two most commonly used species were studied in the inner-ply gluing study, Douglas-fir is the limiting species as far as solid knot size in inner plies is concerned in recommendations for changes to the Product Standard.

It should be noted that the Standards Committee did not intend that inner ply veneer grade changes which might emerge from this study be applicable to siding panels. This conservative approach to veneer grades in siding is well deserved since it is a high-risk panel subject to long-term weather exposure. Factors other than bond durability need to be considered in this type of panel, among them appearance and machining, especially at the bottoms and sides of grooves. The potential for increased warping or waviness due to greater areas of grain distortion associated with larger solid knots also needs to be considered. Recommendations for veneer grade changes in siding panels in this report will, therefore, be confined to panel backs.

Even though the odds of "stacking" or superimposition of solid knots in the inner plies have been shown to be low, it seems prudent to minimize that possibility. Comparing delamination of 4-ply panels with two adjacent superimposed solid knots to 5-ply panels with two superimposed solid knots separated by a clear veneer, the delamination rate per glueline was 24% less in the 5-ply panels. Comparing delamination of 5-ply panels with three superimposed solid knots to 5-ply panels with two superimposed solid knots separated by a clear veneer, the delamination rate per glueline was 60% less in the panels containing the clear veneer between the knots. This suggests that the safest approach to utilizing larger solid knots in Exterior panels would be to limit their use to veneers where they would be separated by at least one ply in which defects are confined to those permitted in the present "C" grade.

Faces. There would appear to be no problem from a bond quality standpoint of modifying "C" grade face veneers in C-C Exterior sheathing panels, using the same grade guidelines as for backs, provided the adjacent crossband is present "C" grade. The same face grade modifications could be made in C-D sheathing panels bonded with exterior glue (Exposure 1) while permitting existing "D" grade in crossbands. In both cases, consideration should be given to the visual impact of such changes on buyer acceptance.

General. It is not the intention of this study to suggest a modification of the special veneer grade limitations for Structural I or Structural II panels, nor of the "critical section" requirements for "C" grade veneer in par. 3.4.4. of PS1-83, since these are based on structural considerations quite apart from glue bond concerns.

It should be borne in mind when drawing conclusions from this study that all panels were glued under controlled optimum conditions. Past exposure experience has shown that, when gluing conditions are marginal, poor bond quality shows up much more rapidly in knot and burl areas than in clear veneer areas.

RECOMMENDATIONS FOR COMMITTEE CONSIDERATION

The following suggested modifications in "C" grade veneer are maximum size recommendations for committee consideration for inclusion in PS1 based on bond quality tests conducted in this study and on other factors discussed in the report. The effects, if any, on panel strength properties or of visual impact on buyer acceptance have not been considered in these recommendations. All defect sizes are measured across the grain only, except as noted.

Exterior Type Plywood

A. "C" Grade Backs (including Siding and Decorative Exterior)

1. Increase solid knot size to 3".
2. Increase knothole size to 2".
3. Increase allowable splits to 1" in width by any panel length, provided separation at one end does not exceed 1/16" where split runs full panel length. Retain other existing limits on splits.

B. "C" Grade Inner Plies (excluding Siding and Decorative Exterior)

Increase solid knot size to 2-1/2" provided adjacent veneers do not exceed present "C" grade limitations.

C. "C" Grade Faces in C-C Exterior

Permit increased defect sizes listed in A., above, provided the adjacent crossband is present "C" grade.

Interior Type Plywood Bonded with Exterior Glue (Exposure 1)

"C" Grade Faces

Permit increased defect sizes listed in A., under Exterior Type.

Other Considerations

The above recommendations do not apply to Structural I or Structural II panels nor is it suggested that the "C" grade "critical section" requirements of PS1-83, par, 3.4.4. be modified.

FIGURE 1

TEST SPECIMEN PREPARATION DIAGRAM

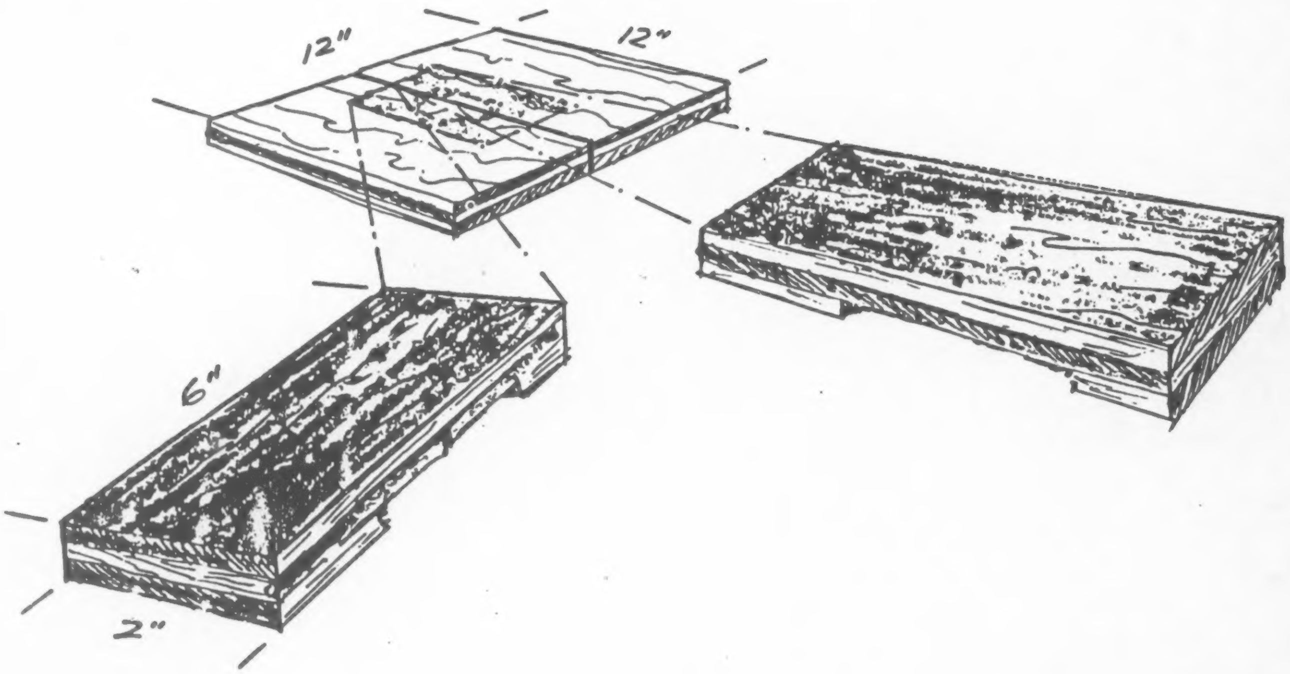


TABLE 1

SIDING PANELS

PANEL CONSTRUCTION

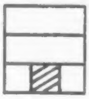
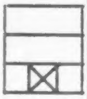
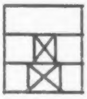
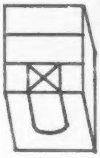
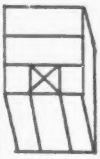
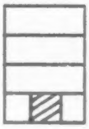
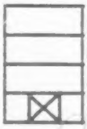
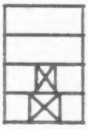
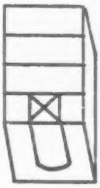
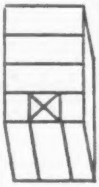
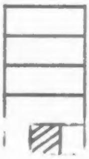
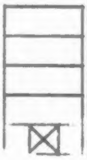
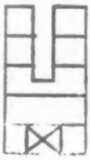
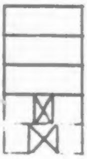
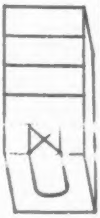
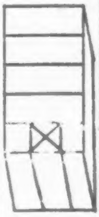
	Veneer Species & Thickness							
Const.	Fir Pine Larch	Cedar	Knot Back	Knothole Back	Knothole Back 5/16" x 1-1/2" Groove Face	Knothole Back and Core	Void Back	Split Back
3-ply 3/8"	1/8" 1/8" 1/8"	1/10" 1/6" 1/10"						
4-ply 1/2"	1/8" 1/8" 1/8" 1/8"	1/10" 1/6" 1/6" 1/10"						
5-ply 5/8"	1/8" 1/8" 1/8" 1/8" 1/8"	1/10" 1/6" 1/10" 1/6" 1/10"						

TABLE 2

SIDING PANELS

DELAMINATION, SQUARE INCHES

ALL SPECIES COMBINED

Const.	Characteristic Size	Knot Back	Knothole Back	Knothole Back 5/16" x 1-1/2" Groove Face	Knothole Back and Core*	Void Back	Split Back
3-ply 3/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		1.9	9.1	2.8
	2 in.	0.5	5.0		1.4	29.9	
	2-1/2 in.	0	12.3		6.7	77.7	
	3 in.	0	32.0		28.8	238.2	
4-ply 1/2"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0.4	1.3	0
	2 in.	0	0		0	2.1	
	2-1/2 in.	0.8	1.9		4.8	60.1	
	3 in.	2.4	9.2		17.6	119.1	
5-ply 5/8"	1/2 in.						0
	1 in.						0.6
	1-1/2 in.	0.8	0.5	0	2.9	0	3.0
	2 in.	0.4	1.9	0	2.1	10.2	
	2-1/2 in.	2.6	0	20.8	7.7	69.9	
	3 in.	1.9	40.2	97.0	44.6	144.9	
Panels/No.		40[a]	30[b]	30[b]	30[b]	30[b]	30[b]

*A 1-1/2 inch knothole in the core adjacent to the back was used for all panels.

[a] Species: Douglas fir, southern pine, western redcedar and western larch.

[b] Species: Douglas fir, southern pine and western redcedar.

TABLE 3

SANDED PANELS

PANEL CONSTRUCTION

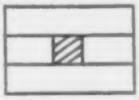
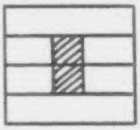
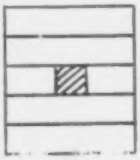
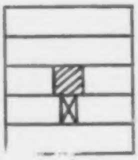
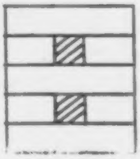
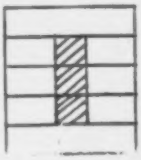
Construction & Veneer Thickness		Knot Center Ply	Knot Center Over Knothole Core	Knot Cores	Knot Center and Knot Core
Fir	Pine				
3-ply 5/16"	3-ply 7/16"				
1/10"	1/8"				
1/10"	1/6"				
1/10"	1/8"				
4-ply 9/16"	4-ply 9/16"				
1/10"	1/8"				
3/16"	1/6"				
3/16"	1/6"				
1/10"	1/8"				
5-ply 13/16"	5-ply 13/16"				
1/8"	1/6"				
3/16"	1/6"				
3/16"	1/6"				
3/16"	1/6"				
1/8"	1/6"				

TABLE 4

SANDED PANELS

DELAMINATION, SQUARE INCHES

COMBINED SPECIES

Const.	Characteristic Size	Knot Center Ply	Knot Center Over Knothole Core*	Knot Cores	Knot Center and Knot Core
3-ply	1-1/2 in.			0	
	2 in.			2.0	
5/16"	2-1/2 in.			0	
or	3 in.			0.8	
7/16"	4 in.			0**	
4-ply	1-1/2 in.			25.7	
	2 in.			43.1	
9/16"	2-1/2 in.			52.7	
	3 in.			165.5	
	4 in.			144.3	
5-ply	1-1/2 in.	3.5	18.6	3.9	32.0
	2 in.	7.9	11.6	42.0	91.6
13/16"	2-1/2 in.	19.1	12.4	53.2	133.0
	3 in.	55.5	101.2	246.3	669.3
	4 in	57.4	38.0	26.7**	0**
Panels/ No.		20	20	20	20

*A 1-1/2 inch knothole in one core was used for all panels.

**Panels per number is 10 (all pine)

TABLE 5

PANEL MANUFACTURE CONDITIONS

Product	Species	Thick.	No. Plies	Press Time (min.)	Glue[(1)] Spread (lbs.)	Total Assembly Time (min.)	Platen Stand Time (sec.)	Platen Temp. °F	PSI Pressure
Siding	Douglas fir	3/8"	3	2-3/4	60	15	30	285	175
		1/2"	4	4	"	"	"	"	"
		5/8"	5	4-3/4	"	"	"	"	"
	Southern pine	3/8"	3	3-1/4	86	15	30	285	180
		1/2"	4	4-1/2	"	"	"	"	"
		5/8"	5	5-1/2	"	"	"	"	"
	Cedar	3/8"	3	3-1/4	64	15	30	270	170
		1/2"	4	4-1/2	"	"	"	"	"
		5/8"	5	5-1/4	"	"	"	"	"
	Larch	3/8"	3	3	62	15	30	285	175
		1/2"	4	4-1/4	"	"	"	"	"
		5/8"	5	5	"	"	"	"	"
Sanded	Douglas fir	5/16"	3	2-1/2	58	15	30	285	175
		9/16"	4	4-1/2	66	"	"	"	"
		13/16"	5	6	66	"	"	"	"
	Southern pine	7/16"	3	3-3/4	88	15	30	285	200
		9/16"	4	5-1/4	"	"	"	"	"
		13/16"	5	7-3/4	"	"	"	"	"

(1) Pounds per 1000 square feet double glueline

TABLE 6

SIDING PANELS

DELAMINATION, SQUARE INCHES

DOUGLAS FIR

Const.	Characteristic Size	Knot Back	Knothole Back	Knothole Back 5/16" x 1-1/2" Groove Face	Knothole Back and Core*	Void Back	Split Back
3-ply 3/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0	5.0	0
	2 in.	0.5	0		0	12.6	
	2-1/2 in.	0	5.0		2.6	34.3	
	3 in.	0	12.3		6.4	69.5	
4-ply 1/2"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0	0	0
	2 in.	0	0		0	1.8	
	2-1/2 in.	0	1.9		1.3	12.6	
	3 in.	0.6	6.1		6.9	57.6	
5-ply 5/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0	0	0	0	0
	2 in.	0	1.4	0	0	2.0	
	2-1/2 in.	0.8	0	5.8	0.8	42.3	
	3 in.	0.5	1.8	14.8	14.9	52.1	
Panels/ No.		10	10	10	10	10	10

*A 1-1/2 inch knothole in the core adjacent to the back was used for all panels.

TABLE 7

SIDING PANELS

DELAMINATION, SQUARE INCHES

SOUTHERN PINE

Const.	Characteristic Size	Knot Back	Knothole Back	Knothole Back 5/16" x 1-1/2" Groove Face	Knothole Back and Core*	Void Back	Split Back
3-ply 3/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0	4.1	2.8
	2 in.	0	0.4		0	7.3	
	2-1/2 in.	0	7.3		3.5	21.1	
	3 in.	0	12.1		18.9	79.3	
4-ply 1/2"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0.4	1.3	0
	2 in.	0	0		0	0.3	
	2-1/2 in.	0	1.9		3.5	46.9	
	3 in.	0	5.5		4.8	54.0	
5-ply 5/8"	1/2 in.						0
	1 in.						0.6
	1-1/2 in.	0.8	0.5	0	2.9	0	2.1
	2 in.	0	0.5	0	0.8	6.1	
	2-1/2 in.	1.8	0	1.0	0	26.6	
	3 in.	0	25.0	14.0	14.8	72.8	
Panels/ No.		10	10	10	10	10	10

*A 1-1/2 inch knothole in the core adjacent to the back was used for all panels.

TABLE 8

SIDING PANELS

DELAMINATION, SQUARE INCHES

WESTERN REDCEDAR

Const.	Characteristic Size	Knot Back	Knothole Back	Knothole Back 5/16" x 1-1/2" Groove Face	Knothole Back and Core*	Void Back	Split Back
3-ply 3/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		1.9	0	0
	2 in.	0	0		1.4	10.0	
	2-1/2 in.	0	0		0.6	22.3	
	3 in.	x	7.6		3.5	89.4	
4-ply 1/2"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0		0	0	0
	2 in.	0	0		0	0	
	2-1/2 in.	0.8	0		0	0	
	3 in.	x	x		x	7.5	
5-ply 5/8"	1/2 in.						0
	1 in.						0
	1-1/2 in.	0	0	0	0	0	0.9
	2 in.	0.4	0	0	1.3	2.1	
	2-1/2 in.	0	0	0	6.9	1.0	
	3 in.	x	x	x	x	20.0	
Panels/No.		10	10	10	10	10	10

*A 1-1/2 inch knothole in the core adjacent to the back was used for all panels.

TABLE 9

SIDING PANELS

DELAMINATION, SQUARE INCHES

WESTERN LARCH

Const.	Characteristic Size	Knot Back
3-ply 3/8"	1/2 in.	
	1 in.	
	1-1/2 in.	0
	2 in.	0
	2-1/2 in.	0
	3 in.	0
4-ply 1/2"	1/2 in.	
	1 in.	
	1-1/2 in.	0
	2 in.	0
	2-1/2 in.	0
	3 in.	0
5-ply 5/8"	1/2 in.	
	1 in.	
	1-1/2 in.	0
	2 in.	0
	2-1/2 in.	0
	3 in.	0
Panels/ No.		10

Note: Knotholes, voids and splits in panel backs were not part of the larch test program.

TABLE 10

SANDED PANELS

DELAMINATION, SQUARE INCHES

DOUGLAS FIR

Const.	Characteristic Size	Knot Center Ply	Knot Center Over Knothole Core*	Knot Cores	Knot Center and Knot Cores
3-ply	1-1/2 in.			0	
	2 in.			1.5	
5/16"	2-1/2 in.			0	
or	3 in.			0.8	
7/16"	4 in.			x	
4-ply	1-1/2 in.			22.4	
	2 in.			36.5	
9/16"	2-1/2 in.			51.9	
	3 in.			162.3	
	4 in.			141.3	
5-ply	1-1/2 in.	3.5	15.2	2.0	31.6
	2 in.	7.9	9.4	42.0	89.1
13/16"	2-1/2 in.	19.1	11.0	51.6	132.1
	3 in.	55.5	100.8	246.3	668.8
	4 in.	48.8	32.9	x	x
Panels/ No.		10	10	10	10

*A 1-1/2 inch knothole in one core was used for all panels.

x = No Data

TABLE 11

SANDED PANELS

DELAMINATION, SQUARE INCHES

SOUTHERN PINE

Const.	Characteristic Size	Knot Center Ply	Knot Center Over Knothole Core*	Knot Cores	Knot Center and Knot Cores
3-ply	1-1/2 in.			0	
	2 in.			0.5	
5/16"	2-1/2 in.			0	
or	3 in.			0	
7/16"	4 in.			0	
4-ply	1-1/2 in.			3.3	
	2 in.			6.6	
	2-1/2 in.			0.8	
	3 in.			3.2	
	4 in.			3.0	
5-ply	1-1/2 in.	0	3.4	1.9	0.4
	2 in.	0	2.2	0	2.5
13/16"	2-1/2 in.	0	1.4	1.6	0.9
	3 in.	0	0.4	0	0.5
	4 in.	8.6	5.1	26.7	0
Panels/ No.		10	10	10	10

*A 1-1/2 inch knothole in one core was used for all panels.

This document is being transmitted by Winston and Strawn, 2550 M Street, N.W., Suite 500, Washington, D.C. 20037, on behalf of its client, Canadian Forest Industries Council, 85 Albert Street, Ottawa, Ontario, Canada KIP 6A4. Since the Canadian Forest Industries Council is a foreign organization, Winston & Strawn is registered with the Department of Justice under the provisions of 22 U.S.C. § 611, _et seq_., as an agent of such foreign principal. Copies of this document are being filed with the Department of Justice, and copies of Winston & Strawn's registration statement are available for public inspection at the Department of Justice. Registration does not indicate approval of this material by the United States Government.

○

88-643 (208)